Argued Dec 8 Judge Davis

2-426

TRANSCRIPT OF RECORD.

SUPREME COURT OF THE UNITED STATES.

No. ~~280.~~ 6

CALEB IVES AND GEORGE B. GREEN, PLAINTIFFS IN ERROR,

vs.

PALMER HAMILTON.

IN ERROR TO THE CIRCUIT COURT OF THE UNITED STATES FOR THE EASTERN DISTRICT OF MICHIGAN.

FILED OCTOBER 18, 1873.

A. P. Bradley

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1 UNITED STATES OF AMERICA, *ss:*

The President of the United States to the honorable the judges of the circuit court of the United States for the eastern district of Michigan, greeting:

Because in the record and proceedings, as also in the rendition of the judgment of a plea which is in the said circuit court before you, between Palmer Hamilton, plaintiff, and Caleb Ives and George B. Green, defendants, a manifest error hath happened, to the great damage of the said Caleb Ives and George B. Green, as by their complaint appears:

We, being willing that error, if any hath been, should be duly corrected, and full and speedy justice done to the parties aforesaid in this behalf, do command you, if judgment be therein given, that then under your seal distinctly and openly you send the record and proceedings aforesaid, with all things concerning the same, to the Supreme Court of the United States, together with this writ, so that you have the
2 same at Washington on the second Monday of October next, in the said Supreme Court to be then and there held, that, the record and proceedings aforesaid being inspected, the said Supreme Court may cause further to be done therein, to correct that error, what of right and according to the laws and custom of the United States should be done.

Witness the honorable Salmon P. Chase, Chief-Justice of the said Supreme Court, this seventeenth day of April, in the year of our Lord one thousand eight hundred and seventy-three.

[SEAL.] ADDISON MANDELL,
Clerk.

(Indorsed:) No. 4950. The Supreme Court of the United States. Cabel Ives & George B. Green, plffs. in error, vs. Palmer Hamilton, deft. in error. Writ of error. Filed in clerk's office April 17, 1873. A. Mandell, clerk.

3 Pleas before the judges of the circuit court of the United States for the sixth circuit and eastern district of Michigan, at the district court room in the city of Detroit, of the term of November, in the year one thousand eight hundred and seventy-two:

IN THE CASE WHEREIN PALMER HAMILTON is plaintiff
and
CALEB IVES & GEORGE B. GREEN ARE DEfendants.

Be it remembered that on the 10th day of October, in the year of our Lord one thousand eight hundred and seventy-one, the said plaintiff, by George V. N. Lothrop, his attorney, came into the court aforesaid before the judges thereof, and filed their declaration against the said defendants, which said declaration is in the words and figures following, to wit:

Declaration.

UNITED STATES OF AMERICA;

In the circuit court of the United States for the eastern district of Michigan, of the tenth day of October, eighteen hundred & seventy-one.

EASTERN DISTRICT OF MICHIGAN, *ss:*

Palmer Hamilton, who is a citizen of the United States, residing

4 in the eastern district of Michigan, plaintiff in this suit, by George V. N. Lothrop, his attorney, comes & complains of Caleb Ives and George B. Green, who are residents of said district, defendants in this action in a plea of trespass on the case upon promises, whereof this declaration is filed as of commencement of suit.

For that whereas the said plaintiff before and at the time of the making of the letters-patent, and of the committing of the grievances hereinafter mentioned, was the original and first inventor of a certain new and useful invention and improvement in saw-mills, which he avers was not used or known before his said invention, and not at the time of his application for a patent in public use, or on sale with his consent or allowance, to wit, in the said eastern district of Michigan; and thereupon the plaintiff, being such original and first inventor, did afterwards, to wit, on the the fifth day of December, A. D. 1865, obtain from the United States of America, in due form of law, letters-patent for his said invention, under the seal of the Patent-Office of the United States, signed by W. T. Otto, who was then Acting Secretary of the Interior, and countersigned by T. C. Theaker, *was* was then Commissioner of Patents, by which letters-patent there was granted and secured to the plaintiff, his heirs, administrators, and assigns, for the full term of seventeen
5 years from the fifth day of December, A. D. 1865, the full and exclusive right and liberty of making, constructing, using, & vending to others to be used, the said improvement in saw-mills, which said letters-patent bearing date the day and year heretofore said, sealed, signed, & countersigned as aforesaid, the plaintiff now brings here into court. And the plaintiff further says that from the time of the making of said letters-patent to the time of the committing of the grievances set forth, the plaintiff did make, use, and vend his said invention, which was of great advantage and profit to him, to wit, at said district. Yet the said defendants, well knowing the premises, and continuing to injure the plaintiff, did, after the making said letters-patent, and within the term of seventeen years mentioned therein, to wit, on the first day of July, A. D. 1870, and on divers other days and times between that day and the day of the commencement of this suit, to wit, at said Detroit, unlawfully and unjustly, and without the leave or license and against the will of the plaintiff, use and exercise said improvement in said saw-mills in breach of said letters-patent, and against the privilege so granted to the plaintiff as aforesaid. Whereby the plaintiff is and has been greatly injured and has been deprived of great gains and profits which he might and otherwise would have derived from his said invention at said
6 district to his damage one thousand dollars, and therefore he brings suit, &c., by

GEO. V. N. LOTHROP,
Plff.'s Atty.

To which said declaration the said defendants, in their own proper persons, on the fourth day of November, A. D. 1871, filed in said court their plea in the words and figures following, to wit:

Plea

The circuit court of the United States for the eastern district of Michigan.

CALEB IVES AND GEORGE B. GREEN, DEFTS., *ads.* PALMER HAMILTON, PLFF.

THE EASTERN DISTRICT OF MICHIGAN, *ss:*

And the said Caleb Ives and George B. Green, in their own proper

persons, come and say that this court ought not to have or take further cognizance of the action aforesaid, because they say that the said supposed causes of action, and each and every of them, (if any such have accrued to the said Palmer Hamilton,) accrued to the said Palmer Hamilton out of the jurisdiction of this court. And this the said Caleb Ives and George B. Green are ready to verify. Wherefore they pray judgment whether this court can or will take further cognizance of the action aforesaid.

GEORGE B. GREEN,
In his own proper person.
CALEB IVES,
In person.

7 And thereupon afterwards, to wit, on the 23 day of November, A. D. 1871, the said plaintiff entered in the common-rule book of said court the defendants' default in the words & figures following, viz:

Default.

NOV. 23d, 1871.

PALMER HAMILTON
vs.
CALEB IVES & JOHN B. GREEN.

It appearing by the return of marshall on file in this cause that the said defendants have been both personally served with the declaration filed in this cause, and said defendants having failed to plead to the said declaration within the time after such service limited by the rules & practice of this court, the default of said defendants for want of plea is hereby entered, and it is ordered that it be referred to the court to assess the plaintiff's damages.

GEO. V. N. LOTHROP,
Plff's Atty.

And afterwards, to wit, on the 29th day of April, A. D. 1872, the said defendants by their attorney came into court, in open court, and caused to be entered the following, to wit:

Order setting aside default.

PALMER HAMILTON
vs.
CALEB IVES AND GEORGE B. GREEN.

8 On motion of defendants, by Charles J. Hunt, their attorney, (Mr. Lothrop, the attorney for plaintiff, being present in court and assenting thereto,) it is ordered that the default heretofore entered in this cause be, and the same is hereby, vacated and set aside, and that said defendants have leave to file a new plea to plaintiff's declaration in said cause.

And afterwards, to wit, on said 29th day of April, A. D. 1872, the said defendants, by Charles J. Hunt, as their attorney, came into court & filed their plea and notice in the words and figures following, viz:

Plea and notice.

The circuit court of the United States for the eastern district of Michigan.

CALEB IVES AND GEORGE B. GREEN, DEFTS., *ads.* PALMER HAMILTON, PLFF.

And the said defendants, by Charles J. Hunt, their attorney, come and defend the wrong and injury, when, &c., and say that they are not guilty of the supposed grievances above laid to their charge, or any or either or any part thereof, in manner and form as the said plaintiff hath above complained against the said defendants, and of this the said defendants put themselves upon the country, and the plaintiff doth the like, &c.

CHARLES J. HUNT,
Atty. for Defts.

9 And it is suggested to the court now here that the defendants give the following notices in writing of special matter, to the plaintiff, thirty days' before trial, under section 15 of the act of Congress passed July 4, 1836, entitled "An act to promote the progress of the useful arts, and to repeal all acts and parts of acts heretofore made for that purpose;" and also under section 61 of the act of Congress passed July 8, 1870, entitled "An act to revise, consolidate, and amend the statutes relating to patents and copyrights."

First. Notice of special matter. Please to take notice that the above defendants will prove on the trial of this cause, in bar of the plaintiff's action, that, for the purpose of deceiving the public, the description and specification by the patentee (the said plaintiff) in the Patent-Office was made to contain less than the whole truth relative to his invention or discovery.

Second. Please to take notice that on said trial of this cause, in addition to the above notice, the defendants will prove that the same or substantially the same was previously invented and patented February 18, 1851, by Isaac Straub, of Cincinnati, Ohio.

And also that the same or substantially the same was previously invented and patented October 18, 1853, by Benjamin Frazee, of Durhamsville, New York.

10 And also that the same or substantially the same was previously invented and patented September 11, 1855, by O. S. Woodcock, of Connersville, Indiana.

And also that the same or substantially the same was previously invented and patented May 20, 1856, by John Robinson, of New Brighton, Pennsylvania.

And also that the same or substantially the same was previously invented and patented January 17, 1860, by Leonard Anderson, of Painesville, Ohio.

And the defendants will further prove, upon said trial as aforesaid, that the thing patented in and by the letters-patent was not first invented by or known to the said Palmer Hamilton, but the same was publicly known and used prior to the time when it is alleged in this action the same was invented by him.

And the defendants will prove that Carlisle Whipple, who resides at Detroit, Michigan, possessed such prior knowledge of the said thing mentioned as aforesaid in said declaration.

CHARLES J. HUNT,
Defts.' Atty.

Award of venire.

Therefore to try the issue above joined let a jury come thereof, by whom, &c., who neither, &c., because as well the said plaintiff as the said defendants have put themselves on that jury.

Verdict.

11 And the jurors of that jury of whom mention is made, to wit: John Forbes, George Bowerman, James I. Christiancy, Thomas B. O'Brien, Enos Becker, Herman Kaichen, Orrin Bagley, William R. Graves, John Ivers, Michael F. Hogan, William V. Griffith, and Sigman Cohn, who were on the 21st day of November, A. D. 1873, duly elected, tried, and sworn to try the issue joined between the parties, after hearing the evidence, the arguments of counsel, and the charge of the court, did, on the 23d day of said November, retire to their room to consult of their verdict, under charge of the officer sworn to attend them, and after being a short time absent did return into court, and being inquired of their verdict, say they find defendants guilty of the grievances laid to their charge in the plaintiff's declaration in manner and form as therein alleged; and they, the jury, assessed said plaintiff's damages on occasion thereof at the sum of two hundred dollars.

Judgment.

It is therefore considered by the court now here that the said plaintiff do recover of said defendants the sum of two hundred dollars damages assessed by the jury as aforesaid, in form aforesaid, together with said plaintiff's costs of suit to be taxed, to wit, the sum of sixty-one dollars and thirty-two cents for the costs and charges of the said plaintiff by him about his suit in that behalf expended.

Motion for new trial.

12 On the 25th day of November, A. D. 1872, the following order was, by order of the court, entered in open court, to wit:

PALMER HAMILTON
vs.
CALEB IVES & GEORGE B. GREEN.

On motion of defendants, by Charles J. Hunt, their attorney, it is ordered by the court, now here, that defendants have until the second day of December next in which to move for a new trial in this cause.

And thereafter, to wit, on the 29th day of November, A. D. 1872, the said defendants, by their said attorney, came into court & filed their motion and affidavits for a new trial in the words & figures following, to wit:

Motion & affidavits for a new trial.

The circuit court of the United States for the eastern district of Michigan.

CALEB IVES & GEORGE B. GREEN, DEFTS.,
ads.
PALMER HAMILTON, PLFF.

The defendants, by Charles J. Hunt, their attorney, come and move the court that the verdict rendered in the above-entitled cause be set

aside, and for a new trial, for the following reasons, and for those set forth in the affidavits hereunto attached:

13 The discovery of new and important evidence in regard to the following points:

1. In regard to the construction of Hamilton's slides by Hamilton himself, after the issue of his patent.

2. In regard to the position of the slides, as placed in mills by Hamilton, or his agents acting under his directions, after he obtained his patent.

3. In regard to the instructions given by Hamilton in relation to the construction and setting of his slides, to purchasers of his patent in different States, all tending to show the construction placed by Hamilton himself on the operation of his combination.

4. In regard to the application of Hamilton, he being the owner of the Woodcock patent, for a re-issue and extension thereof, the said patent being the one mentioned in defendants' notice attached to their plea, said re-issue being desired for the purpose of cutting off the Barlow patent.

5. In regard to the practical working of the Hamilton slides, as put up by himself or his agents, when he first obtained his patent, and until after the issue of the Barlow patent.

6. In regard to the fact that the alleged invention of Hamilton was almost universally condemned by those who were induced to use them, as constructed, put up, and operated by Hamilton or his agents under instructions from him, and in accordance with his patent, while

14 the invention of Barlow was of great benefit to the public.

7. In regard to the fact that the said invention was made by Carlisle Whipple, as set forth in the defendants' notice attached to their plea, and before the said patent was issued to the said Hamilton.

8. In regard to the fact that Carlisle Whipple had knowledge of the said invention before it was made or patented by the said Hamilton, as is mentioned in the said notice attached to the defendants' plea in this case.

For reason of the misdirection of the judge to the jury on the trial of this cause:

1st. In this, that the judge charged the jury that the patent of Hamilton did not require the slide to be set perpendicular.

2d. In this, that the judge charged that under the Hamilton patent, that the slides could be set in any position at the choice of the mechanic setting them.

3d. In this, that the judge charged the jury that if the slide of Ives & Green fell back from a straight line drawn from one end of the slides to the other, that it was an infringement of the Hamilton patent.

CHARLES J. HUNT,
Defts.' Atty.

The circuit court of the United States for the eastern district of Michigan.

15 CALEB IVES AND GEORGE B. GREEN, DEFTS., *ads.* PALMER HAMILTON, PLFF.

To the above-named plaintiff:

Please to take notice that, on Monday, the 2d day of December, 1872,

on the opening of the court, or as soon thereafter as counsel can be heard, a motion will be made that a new trial may be granted to the said defendants, for the following reasons and on the annexed affidavits:

The discovery of new and important evidence in regard to the following points:

1st. In regard to the construction of Hamilton's slides by Hamilton himself after the issue of his patent.

2d. In regard to the position of the slides as placed in mills by Hamilton, or his agents acting under his directions, after he obtained his patent.

3d. In regard to the instructions given by Hamilton in relation to the construction and setting of his slides to purchasers of his patent in different States, and tending to show the construction placed by Hamilton himself on the operation of his combination.

4. In regard to the application of Hamilton, he being the owner of the Woodcock patent, for a re-issue and extension thereof, the said patent being the one mentioned in defendants' notice attached to their plea, said re-issue being desired for the purpose of cutting off the Barlow patent.

16 5. In regard to the practical working of the Hamilton slides as put up by himself or his agents when he first obtained his patent and until after the issue of the Barlow patent.

6. In regard to the fact that the alleged invention of Hamilton was almost universally condemned by those who were induced to use them as constructed, put up, and operated by Hamilton, or his agents under instructions from him and in accordance with his patent, while the invention of Barlow was of great benefit to the public.

7. In regard to the fact that the said invention was made by Carlisle Whipple, as set forth in the defendants' notice attached to their plea, and before the said patent was issued to the said Hamilton.

8. In regard to the fact that Carlisle Whipple had knowledge of the said invention before it was made or patented by the said Hamilton, as is mentioned in the said notice attached to the defendants' plea in this case.

For reason of the misdirection of the judge to the jury on the trial of this cause:

1st. In this, that the judge charged the jury that the patent of Hamilton did not require the slide to be set perpendicular.

2d. In this, that the judge charged that, under Hamilton's patent, that the slide' could be set in any position at the choice

17 of the mechanic setting them up.

3. In this, that the judge charged the jury that if the slide of Ives and Green fell back from a straight line drawn from one end of the slide to the other, that it was an infringement on the Hamilton patent.

CHARLES J. HUNT,
Defts.' Atty.

The circuit court of the United States for the eastern district of Michigan.

CALEB IVES & GEORGE B. GREEN, DEFTS., *ads.* PALMER HAMILTON, PLFF.

THE EASTERN DISTRICT OF MICHIGAN, *ss:*

Thomas S. Sprague, being duly sworn, deposes and says that he is

one of the attorneys of the said defendants; that, in preparing the evidence for the trial of this cause, the defendants relied upon the testimony of Ashbel P. Barlow to establish the manner in which Palmer Hamilton, the said plaintiff, used and set the slides mentioned in his said patent, and the manner in which they were constructed; that the said Barlow, as this defendant is informed and verily believes to have been very ill with an ab'cess in the stomach during this last fall, and that his physician has prohibited him from travelling; that without the aid of the said Barlow the defendants were without the means
18 of establishing the above facts, as they were unable to find any one who had any knowledge of such facts in regard to the said slides; that, during the progress of the trial of this cause, this deponent learned that one L. F. Wilkinson, residing in Niles, in the western district of Michigan, had bought of the said Palmer Hamilton the right to make, use, and sell to others to use, the improvement set forth in his said patent in certain territory; and that the said Wilkinson had some knowledge of the manner in which the said Palmer Hamilton constructed and used the said slides; that this deponent immediately telegraphed to the said Wilkinson to come on to attend the said trial, but that the said Wilkinson, altho' he immediately started, did not arrive here until after the case had been given to the jury; that the said Wilkinson informed this deponent that the said Palmer Hamilton had sold to him the right to make, use, and to vend to others to use, the improvement so patented in the State of Pennsylvania; and that the said Hamilton instructed him to set the slides perpendicular; and that the said Hamilton so set the slides; and that he, the said Wilkinson, knew of two or three other parties who purchased of the said Hamilton the right to use the said improvement, and who had received the same instructions as to the setting of the said slides as given to the said Wilkinson, one
19 of whom resides in the State of Indiana, and one who resides in the western part of this State.

That this deponent, before the trial of this cause, made diligent inquiries for Carlisle Whipple, who had knowledge of the said improvement before the alleged discovery by said Hamilton, but could only find that the said Whipple had gone to the State of Illinois to work, but was unable to learn his address.

That since the trial of this cause this deponent has learned of the death of the said Carlisle Whipple, and has found that the daughter and the widow of the said Whipple are in possession of the knowledge that the said Whipple knew of the said improvement before the alleged discovery thereof by the said Hamilton.

And that the evidence of the said Wilkinson, and of the said widow and daughter of Carlisle Whipple, will be of great importance to the said defendants on the trial of this cause if the same could be used therein.

(Sig'd) THOS. S. SPRAGUE.

Sworn & subscribed to before me this 25 day of November, 1872.

FREDERICK EBERTS,
Notary Public, Wayne County, Michigan.

The circuit court of the United States for the eastern district of Michigan.

CALEB IVES AND GEORGE B. GREEN, defts., *ads.* PALMER HAMILTON, plff.

EASTERN DISTRICT OF MICHIGAN, *ss:*

Charles J. Hunt, being duly sworn, deposes and says: That he is the attorney of the defendants in the above-entitled cause; that in preparing the case for trial great reliance was placed on the testimony of Ashbel P. Barlow, who resides at St. Joseph, in Berrien County, State of Michigan, and that said Barlow was well acquainted with the patent of the said Hamilton and the manner of working the same, and had knowledge of the defects thereof; and also of all instructions given by said Palmer Hamilton in relation to setting the same to his agents and to those who purchased the rights secured by said patent of the said Hamilton; and that the said Barlow was the only person known to this deponent or to any one of the said defendants, as this deponent is informed and believes, who had knowledge of these facts.

That this deponent expected to have the said Barlow as a witness in this cause, but that he was informed late in the month of October last that the said Barlow had been so low with an ab'cess in the stomach that his life was dispaired of, but that he was slowly recovering;
21 but that since the commencement of this term of court this deponent received a communication from the said Barlow that his physician had prohibited him from travelling, as another ab'cess was forming.

That after the case had been closed this deponent was informed that one Wilkinson, who resides at Niles, in the county of Berrien, State of Michigan, had some knowledge of Hamilton's method of setting his slides, when he (the said Hamilton) first obtained the said patent; and also, that the said Wilkinson had been telegraphed to come in to attend the trial of this cause.

That the said Wilkinson, altho' he started immediately after the receipt of the telegram, did not arrive in the city until Saturday morning, after the case had been closed and submitted; that the said Wilkinson informed this deponent that he had purchased of the said Hamilton all the rights secured to the said Hamilton by said letters-patent in and for the State of Pennsylvania; and that the said Hamilton instructed him (the said Wilkinson) to set the slides perpendicular, and that they were of no use unless set perpendicular.

And the said Wilkinson also informed this deponent that he (the said Wilkinson) knew of two or three other persons who had also bought like rights of the said Hamilton for other territory, and who had received
22 like instructions from the said Hamilton—one of whom resides in the western part of this State, and another in the State of Indiana.

And this deponent further says that he made many inquiries of different persons whom he supposed might have any knowledge of Carlisle Whipple, but the only information he could obtain was, that the said Carlisle Whipple was somewhere in the State of Illinois at work, but nothing could be learned of his address, nor could this deponent obtain any definite information of the family of the said Whipple.

And this deponent further states that it was only by accident, after

the trial of this cause, that he obtained a clue to find the family of the said Whipple, and learned that the said Whipple had been dead for nearly a year.

That upon finding the widow and daughter of the said Whipple, they informed this deponent that the said Whipple had constructed models of saw-mills having the curved slides at the top, before he, the said Whipple, knew the said Hamilton, and before the said Hamilton made his alleged invention as set forth in his said patent; and that they had papers in relation thereto, all tending to show that the said Carlisle Whipple was the first and original inventor of said improvement mentioned in said patent, and more particularly of the said curved
23 slides at the top of the saw, and that he applied for a patent therefor.

And that the evidence of the said Wilkinson, and of the witnesses he mentioned, and of the widow and daughter of the said Carlisle Whipple, will be of great importance to the said defendants on the trial of this cause if a new trial should be granted to the said defendants.

CHARLES J. HUNT.

Sworn & subscribed to before me this 27th day of November, 1872.

FREDERICK EBERTS,
Notary Public, Wayne County, Michigan.

And thereafter, to wit, on the 16th day of January, A. D. 1873, said motion for new trial was denied, & the following order entered in open court:

Motion for new trial denied.

PALMER HAMILTON
vs.
CALEB IVES & GEORGE B. GREEN.

The motion of defendants for a new trial, heretofore argued in this cause, having been duly considered, is now by the court here denied, with costs against said defendants, and an attorney-fee of ten dollars to said plaintiff.

And thereafter, to wit, on the 20th day of January, A. D. 1873, the court entered an order in open court, in the words following, to wit:

Order setting aside judgment, &c.

24 PALMER HAMILTON
vs.
CALEB IVES AND GEORGE B. GREEN. } Patent case.

It appearing to the court that on the twenty-third day of November, A. D. eighteen hundred and seventy-two, at the present term of this court, this cause was tried by a jury and a verdict rendered in favor of said plaintiff against said defendants, and plaintiff's damages were then assessed by said jury at the sum of two hundred dollars; and that thereupon judgment was entered in favor of said plaintiff against said defendants for the said sum of two hundred dollars, and said plaintiff's costs of suit: Now, on motion of G. V. N. Lothrop, attorney for said plaintiff, it is hereby ordered that the said judgment on said verdict for

the said sum of two hundred dollars and costs of suit, be and the same is now by the court here vacated, rescinded, and set aside.

Judgment.

And on further motion of said plaintiff, by his said attorney, it is considered by the court now here that the said plaintiff do recover of the said defendants the sum of four hundred dollars, being double damages under the statute, together with the plaintiff's costs of suit to be taxed, &c.

And thereafter, to wit, on the 22d day of January, A. D. 1873, the plaintiff's costs of said suit were, by consent of defts.' atty., taxed at the sum of $61.32.

25 And thereafter, to wit, on the 25 day of February, A. D. 1873, the parties came into court and filed a stipulation in the words & figures following, to wit:

Stipulation.

CALEB IVES & GEORGE B. GREEN, DEFTS., *ads.* PALMER HAMILTON, PLFF.

It is hereby stipulated that the time for settling the bill of exceptions in the above-entitled cause be extended until the first day of April, 1873.

GEO. V. N. LOTHROP,
Atty. for Plff.
CHAS. J. HUNT,
Atty. for Deft.

And thereupon the court, on said 25 day of February, A. D. 1873, entered the following order in open court:

Order.

PALMER HAMILTON *vs.* CALEB IVES & GEORGE B. GREEN.

On reading & filing stipulation in this cause, and on motion of Charles J. Hunt, of counsel for defendants, it is ordered that the time for settling the bill of exceptions in said cause be extended until the 1st day of April, 1873.

And thereafter the court, to wit, on the 31st day of March, A. D. 1873, entered in open court the following order, to wit:

26 *Order.*

PALMER HAMILTON *vs.* CALEB IVES & GEORGE B. GREEN.

On filing stipulation in this cause, and on motion of defendants, by

Mr. Hunt, their attorney, it is ordered that the time for settling the bill of exceptions in this cause be, and the same is hereby, extended until the 30th day of April next.

27 The circuit court of the United States for the eastern district of Michigan.

CALEB IVES & GEORGE B. GREEN, DEFTS., *ads.* PALMER HAMILTON, PLFFS.

At a session of the said circuit court held at the city of Detroit, in the said eastern district of Michigan, on the twenty-second day of November, in the year eighteen hundred and seventy-two, before the honorable John W. Longyear, one of the judges of the said circuit court, the issue joined between the parties in this cause came on to be tried by a jury of the said eastern district of Michigan, for that purpose duly empanneled, good and lawful men of the said district, at which day came then as well the said plaintiff as the said defendant, by their respective attornies; and the jurors of the jury aforesaid empanneled to try the said issue also came, and were then and there duly chosen and sworn to try the issue aforesaid between the parties aforesaid.

28 And, upon the trial of the said issue, the counsel for the said plaintiff, to maintain and prove the issue on his part, produced and offered in evidence certain letters-patent of the United States of North America for a new and useful improvement in saw-mills, issued to the said Palmer Hamilton, and dated on the fifth day of December, eighteen hundred and sixty-five, and numbered 51,310, and signed by W. T. Otto, Acting Secretary of the Interior, and sealed with the seal of the Patent-Office, and countersigned by T. C. Theaker, Commissioner of Patents.

But to the reading of the same in evidence the said counsel for the said defendants did then and there object, because—

1. The claim is for a result or effect, viz, "giving to the saw in its downward movement a rocking or rolling motion."

2. The claim is indefinite & uncertain.

(*a.*) The claim is not for and does not describe any particular curve, as a circle, ellipse, &c.

(*b.*) It does not show the position in which the curve is to be put.

(*c.*) It does not show that the upper & lower ends of the curved slides is to be perpendicular, and yet they seek to extend patent over

29 our two straight lines, the lower end of which is set forward of upper end about three inches. The specification and drawings attached to said letters-patent is as follows, viz:

"The sc'edule referred to in these letters-patent and making a part of the same:

"To all whom it may concern:

"Be it known that I, Palmer Hamilton, of Detroit, in the county of Wayne and State of Michigan, have invented certain new and useful improvements in hanging and running saws in saw-mills, and that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing, in which

"Figure 1 represents a front elevation of a portion of a saw-mill, with my improvement applied thereto.

"Figure 2 represents a vertical section of the same, with a portion of the saw removed; and

"Figure 3 represents a side view of one of the lower guides of the saw.

"The object of my invention is to impart to the saw of a saw-mill a rocking motion while it is cutting, so that the movement of its
30 toothed edge then assimilates to that of the pit-saw, operated by hand.

"To this end, my improvement consists of the combination of the saw with a pair of curved guides at the upper end of the saw, and a lever, connecting-rod, or pitman, straight guides, pivoted cross-head and slides, or blocks, and crank-pin or their equivalents, at the opposite end, whereby the toothed edge of the saw is caused to move unequally forward and backward at its two ends while cutting.

"The best mode of embodying my invention in a practical form with which I am acquainted, is represented in the accompanying drawing, in which the saw is fitted at its upper extremity with a cross-head, *a*, whose ends are pivoted in blocks, *b*, which are arranged to slide in the grooves of a pair of curved guides, C C, that are secured to the frame D of the saw-mill.

"The lower end of the saw is connected by a pivot, *e*, with the overhanging end, *f*, of a lever-connecting rod, G, which is fitted at a point intermediate between its two ends, *f h*, with a cross-head, *i*. The ends of the cross-head are pivoted in a pair of blocks, *k*, which are arranged to slide in the grooves of a pair of guides, J J, that are secured to the frame of the saw-mill.

31 "The lower end, *h*, of the connecting-rod G is connected with a crank-pin, *m*, which projects from the face of a wheel, N, secured to a rotating-shaft, O, by turning which the saw is caused to move to and fro.

"The feed-motion of the saw-mill must, of course, be arranged to cause the log to be moved in the direction of the arrow *s*, towards the cutting-edge of the saw. As the upper guides are concave to the advance of the log, the effect upon the upper end of saw is, that, while it is descending, it also moves in the direction indicated by the arrow *s*, and it continues this movement as it de'cends, until about half of the stroke is accomplished; then, during the remainder of the stroke, it moves in a direction the reverse of that indicated by the arrow *s*.

"Moreover, as the connecting-rod is made to osci'late upon the axis of its cross-head, *i*, by the rotary motion of the crank, the end *f*, which overhangs the cross-head and is connected with the saw, and that end of the saw, are caused to describe a curved line, *t*, which is convex to the advance of the log, so that the lower end of the saw has a curved movement, the reverse of that of its upper end. The result is,
32 that the toothed-edge of the saw rock' upon its work with a movement similar to that of the ordinary pit-saw worked by hand, and the cutting is materially facilitated.

"On the other hand, when the saw rises, its lower end is caused by the oscillation of the *the* connecting-rod to describe a curve, (represented by the dotted line *t'*,) which is concave to the advance of the log, so that the toothed-edge is moved away from the wood, or f'eed therefrom, thereby permitting the log to be fed forward during the whole ascent of saw, and also permitting the saw-dust to escape after each cut, however deep the cut may have been, whereby choking is effectually prevented.

"Having thus described the best mode with which I am acquainted of

embodying my improvement, what I claim as my invention and desire to secure by letters-patent is:.

"Giving to the saw in its downward movement a rocking or rolling motion, by means of the combination of the cross-head working in curved guides, at the upper end of the saw, the lower end of which is attached to a cross-head working in straight guides, and pivoted to the pitman below the saw, with the crank-pin, substantially as described."

33 But the said circuit judge did then and there declare and deliver his opinion that the said objection so taken by the counsel for the defendants as aforesaid ought not to be allowed, but that the said letters-patent ought to admitted in evidence and did accordingly decide that the same should be read in evidence, on the part of the said plaintiff; to which opinion and decision of the said circuit judge the said counsel for the defendant did then and there except.

The plaintiff also gave in evidence that the defendants were using a combination of the cross-head working in guides composed of straight sides, or grooves set at an angle in the middle, at the upper end of the saw, the lower end of which is attached to a cross-head working in straight guides, and pivoted to the pitman above the end of the saw, wlith the crank-pin, the same as in the plaintiff's combination. And, also, that the guides used by the defendants at the upper end of the saw are so used with the lower end set forward of a plumb-line dropped from the top of the guides.

And the plaintiff, further to maintain the said issue, produced and put in evidence before the jury the actual guides used in the mill of the defendants, at the upper end of the saw, and showed that the same were thirty-four inches in length, and that if a chord was drawn from the top to the bottom of the face of said guides the longest distance from said chord to the face of the guide would be but one-fourth of an inch.

The plaintiff further gave evidence tending to show that the form of the upper guides used by defendants were mechanically equivalent in the actual operation of sawing to the form of the upper guides in the patent of the plaintiff, that the difference in form was not really observable to the eye without the aid of instruments, and that the tendency in actual use was to wear the guides used by defendants to the form of a curve.

The plaintiff also gave evidence by working models tending to show that the motion given by the machine of the plaintiff to the teeth of the saw in actual operation in sawing was substantially the same given by the machine as used by the defendants; that the plaintiff, in

34 the actual construction of mills under his patent, had almost from the outset and before the issuing of the Barlow patent at times placed the lower ends of the upper guides about one-half inch forward of a plumb-line dropped from the top in order to give a favorable rake to the saw when in operation, and that an equivalent result was obtained when the said guides were set perpendicular by giving an overhang to the top of the saw.

The plaintiff further gave evidence tending to show that both methods of attaching the lower end of the saw to the pitman, the one above and the other below the crank-pin, were well know to mechanics before the date of plaintiff's patent, and that the motion given by one when a forward motion was applied, was precisely the same as given by the other when a backward motion was applied, and that this had been well known to mechanics for a great many years.

And thereupon the counsel for the said defendants, to maintain and

prove the said issue on his part, gave in evidence that the guides used by the defendants at the upper end of the saw are not curved guides, but are composed of two straight guides or slides, and that the lower end of these upper guides are set forward of a perpendicular line, let fall from the top of the slide so far that the whole of the slide was in front of, or projected towards the advance of, the log, so that the top of the saw in its downward movement did not move in the direction of the advance of the log; and also that the cross-head to which the lower end of the saw is attached, is pivoted above instead of below the lower end of the saw; and also gave in evidence the letters-patent issued to Isaac Straub, of Cincinnati, Ohio, dated February 18, 1851, and numbered 7943.

And that the said circuit judge did then and there, also, in response to the requests of the counsel for the said defendants, to the said
35 circuit judge to charge the jury, further declare and deliver his opinion to the said jury, that—

"The first request is,

"That if the patent of Hamilton is for giving to the saw a rocking or rolling motion, then that Straub's patent was for the same motion, and therefore the patent of Hamilton is not valid, because it is not new.

"As has been already remarked, it is for the court to determine what the patent is for. In overruling defendants' objection to the introduction of the patent in evidence, the court has already decided that the patent is not for giving the saw a rocking or rolling motion. Although that was the object or result to be accomplished, yet it was not the thing patented. The thing patented is the combination by which the result named is claimed to be attained. I see no cause to change that ruling. If the patent was as supposed in the request, then the balance of the request would be correct; but the court having ruled that such is not the case, I must decline to give the charge requested. This disposes of the Straub patent, which was the only evidence introduced tending to impeach the novelty of the plaintiff's patent."

36 To which last-mentioned opinion of the said circuit judge the said counsel for the said defendants did then and there, on behalf of the said defendants, except.

"The fourth request is—

"That the claim is for a combination and that it cannot be infringed by the use of any number of its parts less than the whole, nor by a different arrangement of the parts.

"Granted, with the qualification provided that such omission or different arrangement of parts in combination are not merely colorable, and that notwithstanding such omissions and variations the combination is not substantially the same combination as that patented."

To which last-mentioned opinion of the said circuit judge the counsel for the said defendants did then and there, on behalf of the said defendants, except.

The fifth request is—

"That the claim only covers the combination of the devices shown in the specification and drawings, and is limited to those devices, and in the particular relation and position therein shown and described, and
37 *and* that resort must be had to the specification and drawings to determine what is meant by the terms used in the claim.

"This request is granted with this addedqualification: so far, and so far only, however, as such particular relation and position of the several parts constituting the *the* combination, as shown and described in the

specification and drawings, are material to the combination patented in its practical operation."

To which last-mentioned opinion of the said circuit judge the said counsel for the said defendants did then and there, on behalf of the said defendants, except.

The sixth request is—

"That there is no infringement unless the jury find that the defendants use a mill or machine constructed substantially like the one described in the patent, having at the top of the saw curved slides so placed that the top of the saw in the first half of its downward stroke shall move from the log, or, in other words, that it shall fall back from a plumb-line let fall from the top of the slide, during that part of
38 the down-stroke, while the lower part of the saw is going forward or towards the log, and that in the last half of the downward stroke the upper part of the saw shall go forward or towards the log, while the lower part is going back from the log, and that the lower end of the saw is pivoted to the pitman above the nodle-pin.

"This request in its first sentence, 'that there is no infringement unless the jury find that the defendants use a machine or mill constructed substantially like the one described in the patent,' is correct, and I so charge you, but the limitations contained in what follows I do not think are in all respects correct, and I therefore decline to give you that part of the request as it is written."

To which last-mentioned opinion of the said circuit judge the said counsel for the said defendants did then and there, on behalf of the said defendants, except.

"In relation to the backward movement of the top of the saw in the first half of its downward stroke, I charge you that if the movement in that respect is backward from a line drawn from the starting-
39 point of the downward motion to the point of its termination, the call in the specification in that regard is answered, and that it makes no difference whether that line be a plumb-line, or otherwise."

To which last-mentioned opinion of the said circuit judge the said counsel for the said defendants did then and there, on behalf of the said defendants, except.

"The seventh request is—

"That if the slides are not curved there is no infringement.

"Abstractly considered the proposition contained in this request is correct, and I so charge you; but as applied to this case, I must add an explanation, and that is, that the question is an open one for you to determine whether the defendants' upper guides are practically curved guides or not. If their form is so near a curve that on that account their practical operation and effect are the same or substantially the same as a curve, then the principle of the curved guides is invaded, and they are practically and substantially curves, notwithstanding that such
40 is not their exact mathematical form."

To which last-mentioned opinion of the said circuit judge the said counsel for the said defendants did then and there, on behalf of the said defendants, except.

"The eighth request is—

"That if the face of the slides are not placed so that the top and bottom of the slides are in the same perpendicular line, there is no infringement.

"This request is refused, and on the contrary I charge you that the plaintiff is entitled to the protection of his patent no matter whether the curved slides be set in one line or another, provided the combina-

tion be otherwise complete. It is a mere matter of adjustment, which any competent mechanic skilled in building saw-mills and adjusting the saw for the most effective service would readily understand and adopt."

To which last-mentioned opinion of the said circuit judge the said counsel for the said defendants did then and there, on behalf of the said defendants, except.

"The ninth request is—

41 "That if the slides used by the defendants were made with two straight faces or planes, and so put up, no amount of wear would constitute an infringement.

"This, like the seventh request, is correct in the abstract, and so I charge you; but as applied to the case now in hand, the jury must consider and examine, and if they can ascertain, whether the tendency of the natural wear of the cross-tree upon the slides to bring them more nearly to the curved form, arises from an effort of the cross-tree to follow a curved line in consequence of the nearness which the form of the guides assimilate or approaches that of a curve; if such is the fact, then the use of curved guides, made so by wear or more completely so than when first put up, would be an infringement in that respect."

To which last-mentioned opinion of the said circuit judge the said counsel for the said defendants did then and there, on behalf of the said defendants, except.

"The tenth request is—

"That there is no infringement unless the jury find that the 42 saw is pivoted to the pitman above the cross-head, such pivoting being a part of the combination claimed.

"This charge I give as requested, but with this qualification: unless the jury shall find that the different pivoting adopted by the defendants is a mere evasion. If the result of such different pivoting of the lower end of the saw, by simply reversing the motion of the crank, is the same, and such different pivoting and crank-motion was an old device and known when plaintiff's patent was granted so that it might have been adopted by him if he had seen fit, instead of the mode he did adopt, and with the same result, then such different pivoting is an equivalent for the mode patented and will not protect defendants from the charge of infringement."

To which last-mentioned opinion of the said circuit judge the said counsel for the said defendants did then and there, on behalf of the said defendants, except.

And the said circuit judge, under the charge and with the direc- 43 tions aforesaid, left the aforesaid issue and the evidence so given on the trial thereof as aforesaid, to the said jury; and the jury aforesaid then and there gave their verdict for the said plaintiff, and assessed his damages, on occasion of the premises, at the sum of two hundred dollars.

And because none of the exceptions so offered, and made to the opinion and decision of the said circuit judge, do appear upon the record of the said trial, therefore, on the prayer of the said defendant, by his said counsel, the said circuit judge hath signed this bill of exceptions, according to the statute in such case made and provided, this twenty-sixth day of April, one thousand eight hundred and seventy-three.

JNO. W. LONGYEAR,
District Judge.

[Here follow two diagrams, marked page 43.]

44 (Indorsed:) No. 4950. The circuit court of the United States for the eastern district of Michigan. Caleb Ives and George B. Green, defts., ads. Palmer Hamilton, plff. Bill of exceptions. Filed in clerk's office May 14, 1873. A. Mandell, clerk. Chas. J. Hunt, atty. for defts.

45 The Supreme Court of the United States.

CALEB IVES AND GEORGE B. GREEN, PLAINTIFFS IN ERROR,
vs.
PALMER HAMILTON, DEFENDANT IN ERROR.

And now comes the said plaintiff in error, and for assignment of errors says:

That on the trial of said cause, the said counsel for the said plaintiffs in error, when the said patent of the said Palmer Hamilton was offered in evidence, objected thereto, for the following reasons:

1st. The claim is for a result or effect, viz, "giving to the saw in its downward movement a rocking or rolling motion."

2d. The claim is indefinite and uncertain.

(*a.*) The claim is not for, and does not describe, any particular curve, as a circle, ellipse, &c.

(*b.*) It does not show the position in which the curve is to be put.

(*c.*) It does not show that the upper and lower ends of the curved
46 slides is to be perpendicular, and yet they seek to extend the patent over our two straight lines, the lower end of which is set forward of the upper end about three inches.

And the said plaintiffs in error say that the said judge erred in overruling the said objections and in admitting the said patent in evidence.

The said counsel for the said plaintiffs in error also requested the said judge to charge the jury on the trial of the said cause:

"That if the patent of Hamilton is for giving to the saw a rocking or rolling motion, then that Straub's patent was for the same motion, and therefore the patent of Hamilton is not valid, because it is not new."

And that the said judge erred in refusing to charge as requested, and in the charge which he did give in regard thereto, viz:

"As it has been already remarked, it is for the court to determine what the patent is for. In overruling defendants' objection to the introduction of the patent in evidence, the court has already decided that the patent is not for 'giving the saw a rocking or rolling motion.'
47 Although that was the object or result to be accomplished, yet it is not the thing patented. The thing patented is the combination by which the result named is claimed to be attained. I see no cause to change that ruling. If the patent was as supposed in the request, then the balance of the request would be correct; but the court having ruled that such is not the case, I must decline to give the charge as requested. This disposes of the Straub patent, which was the only evidence introduced tending to impeach the novelty of the plaintiff's patent."

The said counsel for the said plaintiffs in error also requested the said judge to charge the jury:

"That the claim is for a combination, and that it cannot be infringed by the use of any number of its parts less than the whole, nor by a different arrangement of the parts."

And that the said judge erred in the charge to the jury which he added thereto, viz:

"Granted, with the qualification, provided that such omission or different arrangement of parts in combination are not merely colorable, and that notwithstanding such omissions and variations, the com-
48 bination is not still substantially the same combination as that patented."

The said counsel for the said plaintiffs in error also requested the said judge to charge the jury:

"That the claim only covers the combination of the devices shown in the specification and drawings, and is limited to those devices, and in the particular relation and position therein shown and described, and that resort must be had to the specification and drawings to determine what is meant by the terms used in claim."

And that the said judge erred in the charge he added thereunto, which was:

"This request is granted, with this added qualification, so far, and so far only, however, as such particular relation and position of the several parts constituting the combination, as shown and described in the specification and drawings are material to the combination patented in its practical operation."

The said counsel for the said plaintiffs in error also requested the said judge to charge the jury:

49 "That there is no infringement, unless the jury find that the defendants use a mill or machine constructed substantially like the one described in the patent, having at the top of the saw curved slides so placed that the top of the saw in the first half of its down stroke shall move from the log, or, in other words, that it shall fall back from a plumb-line let fall from the top of the slide during that part of the down stroke while the lower part of the saw is going forward or towards the log, and that in the last half of the downward stroke the upper part of the saw shall go forward or towards the log while the lower part of the saw is going back from the log, and that the lower end of the saw is pivoted to the pitman above the nodle-pin."

And that the said judge erred in the charge he gave to the jury, which was:

"This request, in its first sentence, 'That there is no infringement, unless the jury find that the defendants use a machine or mill constructed substantially like the one described in the patent,' is correct, and I so charge you, but the limitations contained in what follows I do
50 not think are in all respects correct, and I therefore decline to give you that part of the request as it is written. In relation to the backward movement of the top of the saw, in the first half of its downward stroke, I charge you that if the movement in that respect is backward from a line drawn from the starting point of the downward motion to the point of its termination, the call in the specification in that regard is answered, and that it makes no difference whether that line be a plumb-line or otherwise."

The said counsel for the said plaintiffs in error also requested the said judge to charge the jury:

"That if the slides are not curved there is no infringement."

And that the said judge erred in the charge he gave to the jury, which was:

"Abstractly considered, the proposition contained in this request is correct, and I so charge you; but as applied to this case, I must add an explanation, and that is that the question is an open one for you to determine whether the defendants' upper guides are practically and substantially curved guides or not. If their form is so near that of

51 a curve that on that account their practical operation and effect are the same, or substantially the same as a curve, then the principle of the curved guides is invaded, and they are practically and substantially curves, notwithstanding that such is not their exact mathematical form."

The said counsel for the said plaintiffs in error also requested the said judge to charge the jury:

"That if the face of the slides are not placed so that the top and bottom of the slides are in the same perpendicular line, there is no infringement."

And that the judge erred in refusing the said request, and in the charge he gave the jury, which was:

"This request is refused, and, on the contrary, I charge you that the plaintiff is entitled to the protection of his patent, no matter whether the curved slides be set in one line or another, provided the combination is otherwise complete. It is a mere matter of adjustment, which any competent mechanic skilled in building saw-mills and adjusting the saw for the most effective service would readily understand and
52 adopt."

The said counsel for the said plaintiffs in error also requested the said judge to charge the jury:

"That if the slides used by the defendants were made with two straight faces or planes, and so put up, no amount of wear would constitute an infringement."

And that the judge erred in the charge he gave to the jury, which was:

"This, like the seventh request, is correct in the abstract, and I so charge you. But as applied to the case now in hand, the jury must consider and examine, and if they can, ascertain whether the tendency of the natural wear of the cross-tree upon the slides, to bring them more nearly to the curved form, arises from an effort of the cross-tree to follow a curved line, in consequence of the nearness which the form of the guides assimilate' or approaches that of a curve. If such is the fact, then the use of curved guides, made so by wear, or more completely so than when first put up, would be an infringement in that respect."

The said counsel for the said plaintiffs in error also requested the said judge to charge the jury:

53 "That there is no infringement unless the jury find that the saw is pivoted to the pitman above the cross-head, such pivoting being a part of the combination claimed."

And that the judge erred in the charge he gave to the jury, which was:

"This charge I give as requested, but with this qualification: unless the jury shall find that the different pivoting adopted by the defendants is a mere evasion. If the result of such different pivoting of the lower end of the saw, by simply reversing the motion of the crank, is the same, and such different pivoting and crank-motion was an old device, and known when the plaintiff's patent was granted, so that it might have been adopted by him if he had seen fit, instead of the mode he did adopt, and with the same result, then such different pivoting is an equivalent for the mode patented, and will not protect defendants from the charge of infringement."

CHARLES J. HUNT,
Atty. for Plaintiffs in Error.

54 (Indorsed:) The Supreme Court of the United States. Caleb

Ives and George B. Green, plffs. in error, vs. Palmer Hamilton, deft. in error. Assignment of error. Filed in clerk's office, May 31, 1873. A. Mandell, clk.

CHARLES J. HUNT,
Atty. for Plffs. in Error.

55 Know all men by these presents, that I, Eber B. Ward, of the city of Detroit, county of Wayne and State of Michigan, am held and firmly bound unto Palmer Hamilton, of the same place, in the sum of one thousand dollars, lawful money of the United States of America, to be paid to the said Palmer Hamilton, or to his certain attorney, heirs, executors, administrators or assigns, to which payment, well and truly to be made, I do hereby bind myself, my heirs, executors, and administrators, and each and every of them firmly by these presents, sealed with my seal, dated the fifth day of March, one thousand eight hundred and seventy-three.

Whereas lately, at a session of the circuit court of the United States for the eastern district of Michigan, held at Detroit, in said district, in a case depending in said circuit court between Palmer Hamilton, plaintiff, and Caleb Ives and George B. Green, defendants, judgment was rendered against the said Caleb Ives and George B. Green, and the said Caleb Ives and George B. Green having obtained a writ of error from the Supreme Court of the United States, and filed a copy thereof in the clerk's office of said circuit court, to reverse the judgment in the aforesaid suit, and a citation directed to the said Palmer Hamilton, citing and admonishing him to be and appear at a Supreme Court of the United States, to be holden at Washington the first Monday of December next:

Now, the condition of the above obligation is such that if the said Caleb Ives and George B. Green shall prosecute said writ of error to effect, and answer all damages, including just damages for delay, and interest, and costs, if they fail to make their plea good, then the above obligation to be void and of no effect; otherwise to remain in full force and virtue.

E. B. WARD. [L. S.]

Sealed and delivered in presence of—
MILTON D. WARD.
T. C. OWEN.

Approved March 11, 1873.

JNO. W. LONGYEAR,
District Judge.

Filed in clerk's office April 17, 1873.

A. MANDELL, *Clk.*

56-59

60 *Opinion of the circuit court, on motion for new trial by defendants, delivered by Hon. John W. Longyear, district judge, Jan'y* 16, 1873.

PALMER SMITH
vs.
CALEB IVES & GEORGE B. GEEEN.

Motion for a new trial on the grounds—
1st. Of newly-discovered evidence, and,

2d. Erroneous instructions to the jury.

The first ground was disposed of at the hearing, adversely to the motion, the showing upon which it was based being clearly insufficient. The motion was held under advisement, and is now for decision on the second ground alone.

Mr. G. V. N. Lothrop, for the plaintiff.

Mr. Charles J. Hunt, for the defendants.

LONGYEAR, J.

The action in this case was for an alleged infringement of a patent, No. 51,310, granted to the plaintiff Dec. 5, 1865, for an improvement in saw-mills. The device patented consists of a new combination of old elements as a means of producing a certain result, and is set up
61 in the claim in the following words:

"Having thus described the best mode with which I am acquainted of embodying my improvements, what I claim as my invention and desire to secure by letters-patent, is:

"Giving to the saw in its downward movement a rocking or rolling motion, by means of the combination of the cross-head working in curved guides at the upper end of the saw, the lower end of which is attached to a cross-head working in straight guides, and pivoted to the pitman below the saw, with the crank-pin, substantially as described."

In the drawings the curved guides are represented as set with their concave facing in the same direction as the cutting-edge of the saw, and consequently towards the approach of the log, which is represented in the drawings by an arrow marked S, and they are referred to in the specifications as being so set. Nothing whatever is said in the specifications as to whether the curved guides are to be set with the lower end perpendicularly under the upper end, or in an inclined position, they being entirely silent upon the subject. In the drawings, however, they appear as if set in a perpendicular position, and on this account it was claimed at the trial that any other position of the guides was not covered by
62 the patent, and that, because in the combination as used by the defendants, these guides were set with the lower end about two inches forward of a plumb-line let fall from the upper end, (as to which there was no dispute,) there was no infringement. The defendants' counsel asked the court to charge the jury as follows: "That if the face of the slides are not placed so that the top and bottom of the slides are in the same perpendicular line, there is no infringement." The court refused to charge as requested, and charged the jury as follows: "That the plaintiff is entitled to the protection of his patent, no matter whether the curved slides be set in one line or another, provided the combination is otherwise complete. It is a mere matter of adjustment, which any competent mechanic skilled in building saw-mills and adjusting the saw for the most effective service would readily understand and adopt."

This refusal to charge, and the charge as given, are claimed to be erroneous, and constitute the only ground of the present motion, as I construe the three several subdivisions of grounds of motion as spread upon the record. The grounds of motion, as stated upon the record, are as follows:

"1. In this, that the judge charged the jury that the patent of
63 Hamilton did not require the slides to be set perpendicular.

"2. In this, that the judge charged the jury that under Hamilton's patent that the slide could be set in any position, at the choice of the mechanic who set them up.

"3. In this, that the judge charged the jury that, if the slides of Ives

and Green fell back from a straight line drawn from one end of the slide to the other, that it was an infringement on the Hamilton patent."

The first and second, although not in the language of any charge as given, yet clearly have reference to the charge above quoted. But on a careful examination of the whole charge, which was in writing, I am unable to find any portion of it which authorizes the statement contained in the third subdivision. No such charge was given. I do not intend to accuse counsel of intentional misstatement; but that there was a misstatement on the part of the counsel there can be no doubt. The fault of the counsel is, that he evidently made his statement as to what charges were given without resort to the written charges to ascertain their correctness.

The question for decision, then, is as to the correctness of the instruction above quoted.

64 It is claimed that because the curved guides at the upper end of the saw are represented in the drawings as set in a perpendicular position, no other position of the guides, even if the combination be the same in all other respects, is covered by the patent, and that therefore the use by respondants of a like combination, but in which the upper guides are set with the lower ends two inches forward of a perpendicular line let fall from the top ends, is no infringement of the plaintiff's patent.

It is to be observed—

1. That the curved guides are not themselves claimed as new, and, of course, they are not covered by plaintiff's patent.

2. That it is only the position and office of the curved guides in the combination that are patented.

3. That the only respect in which the position of the curved guides in the combination is made specific, or is at all essential, is their location in reference to the saw—that is, of its upper end—and with their concave sides towards its cutting edge, or, as it is expressed in the specifications, "to the advance of the log."

4. That the only office to be filled by the curved guides is to carry the top end of the saw backward of its general line of movement, or, as substantially expressed in the specifications, in the same direction as the advance of the log, during the first half, and forward, or to-

65 wards the log, during the last half, of its downward motion, while at the same time, by another part of the combination, the lower end of the saw is being carried in the opposite directions, thus doing their part in imparting to the saw the "rocking or rolling motion" mentioned in the claim as above quoted.

We see, then, that, so far as the specifications are concerned, nothing is specified as to whether the curved guides are to be set perpendicularly or inclined; and if inclined, at what angle, or how much. So far as the specifications are concerned, then, this matter was certainly left to be adjusted according to the judgment of the builder, for the most effective service. This being the case, and it being the intention of the patentee so to leave the matter, the curved guides could not be represented in the drawings in any other than a perpendicular position, because that is the only initial or starting point or line from which any divergent or inclined position could be calculated. The drawings are intended to represent the positions of the individual parts in the combination, and not mere matters of detail. For instance, the saw is as much a part of the combination as the curved guides. In the drawings, the saw is represented as hung in a perpendicular position. The evidence of

66 all the experts show—and it is undisputed—that no saw-mill, no matter what the combinations or devices used are in other re-

spects, will do effective work without what is called "overhang" of the saw, or its equivalent; that is, the saw must be so hung that when its downward stroke is completed the upper end shall overhang the lower end with reference to a perpendicular line. Now, it may as well be said that a saw-mill built after plaintiff's device is not an infringement of his patent because the saw has the necessary overhang, as to say it is not an infringement because the curved guides are not set perpendicularly. In fact the testimony of the experts tends to show that setting the lower end of the curved guides forward was but one method of giving the saw the necessary overhang. The matter as to how the curved guides shall be set is left unlimited and undefined, like a score or more of other matters of detail, such as the length and degree of curvature, the length and thickness of saw-plate, the length and number of saw-teeth, length of stroke of the crank, length of pitman, length of leverage at the upper end of the pitman, between where it is pivoted to the lower cross-tree and where the saw is pivoted to it, etc., etc. All these are clearly
67 mere matters of adjustment, and may be varied in different cases, according to the intelligence, judgment, or even caprice of the builder, and still the combination be the same, and in each case equally covered by the plaintiff's patent.—Am. Hide, &c., Co. vs. Am. Tool, &c., Co., 4 Fish. Pat. Cases, 284, 304, & 307.

The drawings are no doubt a part of the description of the thing patented, but they must be considered in connection with the specifications. Where the invention patented consists, as in this case, of a combination of old elements to produce a new result, mere matters of adjustment of the individual elements are not limited or controlled by the drawings, unless, 1, they are expressly so limited by the specifications as well; or, 2, such limitation and control are necessary to maintain the integrity of the specifications taken as a whole or of some essential part or parts thereof; or, 3, such limitation and control are essential to produce the result claimed. As to the first, we have already seen that the perpendicular position of the curved guides, as represented in the drawings, are not expressly limited to that position by the specifications.

As to the second, it is claimed on the part of the defendants that the perpendicular position of the curved guides, as represented in the drawings, is necessary to maintain the integrity of the following
68 clause in the specifications, viz: "As the upper guides are concave to the advance of the log, the effect upon the upper end of the saw is that while it is descending it also moves in the direction of the arrow S;" (the arrow S indicates the advance of the log;) "and it continues this movement as it descends until about half of the stroke is accomplished. Then, during the remainder of the stroke, it moves in a direction the reverse of that indicated by the arrow S." It is claimed that inasmuch as the advance of the log is in a horizontal line, the curved guides cannot be concave to it in a strictly mathematical sense, unless the curves be so set that a straight line drawn from one end of the curves to the other, representing the chord of an arc of a circle, be perpendicular to such horizontal line. In order to have this true even in a strictly technical sense, it is necessary that the curve of the guides should be in the exact form of an arc of a circle; but it is not so described in the specifications; neither is it necessarily so in order to maintain the integrity of any portion of the specifications; nor is it essential in order to produce the result claimed. All that is specified and all that is essential is that the upper guides shall be curved. The degree of curvature, and the shape or form of the curve, whether
69 an arc of a circle or otherwise, are non-essentials, but are mere

matters of adjustment, like the length and proportions of the connecting or pitman-rod, &c. The foundation of the argument in that regard is therefore lacking, and the argument falls to the ground; but however this may be, the clause quoted does not purport to be, and it is not, any part of the description of the combination, or of any portion of it. These had been already described. It is simply a description of the office or operation of this particular element, viz, of the curved guides.

It is claimed, however, that, in order to maintain the integrity of the description of the office or operation of the curved guides, as stated in the specification above quoted, it is essential that the guides be set perpendicularly. In order to maintain this claim it is assumed that, in order to have the upper end of the said move in the direction indicated, (in the same direction as the advance of the log,) during the first half of its downward stroke, it must fall back of a plumb-line let fall from its standing-point, and that it cannot be made to do this if the lower ends of the curved guides are set forward of such plumb-line. The fallacy of this assumption appears from the following propositions:

1. The description is not that the upper end of the saw is made
70 to move the one way or the other with reference to a plumb-line. 2. While it is true that, taken by itself, and without making any allowance for the operation and effect of the movement of the lower end of the saw in the opposite direction, the movement of the upper end, in order to be in the same direction as the advance of the log, must be a falling back from a plum-bline, as claimed; yet, when taken in connection with, and as affected by, that other movement, it is not necessarily so, even with the curved guides set perpendicularly. In this connection it must be borne in mind that the movements of the saw here spoken of, all have direct reference to its operative effect upon the log, and of course when the "saw" is spoken of, it must have reference to its operative or toothed edge, and the "upper" and "lower" ends of the saw must be understood to mean those ends of that edge or side, which in practice, as is well known, always terminates several inches below and above the fastenings or hangings at the respective ends of the saw-plate.

It will be remembered that, while des'ending, the two ends of the saw are moved back and forward in opposite directions at the same time—the upper end back by operation of the curved guides during the first half, and forward during the last half, and the lower end
71 by operation of the lever connecting-rod or pitman, forward during the first half and back during the last half of its downward stroke. Each of these movements, of course, affects the saw throughout its entire length, but with a gradually-diminishing effect.

The description in the specifications of the operation and effect of each separate element or part of a patented combination must be read and construed with reference to the entire combination and its results, and the effect which the operation that each element or part has upon that of each of the others. (Cohoon vs. Ring, 1 Fish. Pat. Cases, 403, 419, 420.) So construing the description of the operation and effect of the curved guides now under consideration, it is evident that, while of course the cross-tree operating in the guides, and to which the upper end of the saw-plate is pivoted, must fall back of a plumb-line in the first half of the descent of the saw, the upper end of the saw itself, that is, the upper tooth or teeth of the saw, may be carried so far forward by the forward motion of the lower end as not to fall back of such line, but may, on the contrary, actually move in the opposite direction, de-

pending, of course, upon the degree of curvature of the guides, and the extent to which the lower end is thrown forward. This was, in fact, shown to be the case by experiments at the trial with a model con-
72 structed after the plaintiff's patent, the correctness of which was not disputed. But, *as* paradoxical as it may seem at first view, this does not prove, as claimed, that the statement in the specifications that the upper end of the saw in the first half of its downward stroke moves in the direction of the advance of the log, is untrue. It simply proves that while it must necessarily so move, yet, on account of another simultaneous movement, it is not thereby caused necessarily to, and does not in fact, fall back of a plumb-line, even with the curved guides set perpendicularly as represented in the drawings. This theory of there being a backward motion as the result of an individual cause, and an absolute forward motion as the result of compound causes, is well illustrated by the familiar example of a man starting on the bow of a moving ship, and walking back along the deck to its stern. Now, suppose the ship to be moving forward at the rate of five miles per hour and the man to move towards the stern at the rate of three miles per hour, the man will actually have gone forward of a plumb-line let drop to the ground from where he started, and yet, with reference to the ship, he actually moved the other way.

The backward movement of the upper end of the saw is caused, as we have seen, by the cross-tree to which the upper end of the saw-plate
73 is pivoted, following the curve of the guides. A complete downward movement of the cross-tree is, I think, correctly represented by a straight line drawn from the starting-point of the pivot to the point of the termination of the movement. Now, I think it evident that if the curved guides are so set, no matter what their position may be in other respects, that this pivot, or operating cause, falls back of such straight line during the first half of its downward movement; the call of the specification in that respect is answered. The fact is, however, that this statement in the specifications as to the operation and effect of the curved guides upon the upper end of the saw, is not descriptive of any part of the combination itself. It is a statement merely of the patentee's theory in that regard; and even if he was mistaken in that particular it would not invalidate his patent, because it is immaterial; provided, of course, that the entire combination actually produces the result claimed for it, as to which there is no dispute. (Foss vs. Herbert, 2 Fish. Pat. Cases 31, 35.) "It is well settled by the courts," says Judge Leavitt, "that in the effort to ascertain the intention and meaning of the specifications and claims, they are to be viewed in a liberal spirit, that, if possible, the object of the inventor or patentee may be carried out; mere rigid
74 technicalities are to be set aside unless there is a clear legal necessity for sustaining them." (Goodyear vs. Berry, 3 Fish Pat. Cases, 439, 448.) I entirely concur in the propositions. See also Imlay vs. Railroad Company, 1 Fish Pat. Cases, 340; Goodyear vs. Railroad, ib., 626; Page vs. Ferry, ib., 298; Judson vs. Cope, ib., 615; Burden vs. Corning, 2 ib., 477; Beard vs. Edgerton, 8 Mann, Gr. & Scott, 165; Ames v. Howard, 1 Sum., 482, 485; Blanchard vs. Sprague, 3 Sum., 535, 539; Ryan vs. Goodwin, 3 Sum., 514; Seymour vs. McCormick, 2 Blatch., 240, affirmed except as to the rule of damages, 16 How., 486.

It appears therefore that the claim on behalf of the defendants that the curved guides at the upper end of the saw must be set perpendicularly in order to maintain the integrity of the specification above quoted, has no foundation.

It remains to consider the third and last condition, viz: whether

it is essential to limit the curved guides at the upper end of the saw to a perpendicular position as represented in the drawings, in order to produce the result claimed for the entire combination.

The result as stated in the claim is "giving to the saw in its downward movement a rocking or rolling motion."

These curved guides at the upper end of the saw, it must be
75 borne in mind, perform only a part of the work of imparting to the saw the motion claimed to be imparted by the entire combination. How it performs the work we have already seen. Now, it is evident that any practical inclination of the guides from a perpendicular position—that is, any inclination that will allow the saw to respond to the entire revolution of the crank, and do effective work, which was shown in practical use to be from one to two inches only—would not destroy the effect of the curve of the guides upon the motion of the saw. It would, no doubt, somewhat modify and slightly diminish that effect, but it must be borne in mind that the motion claimed as the result of the combination is in no manner limited to any particular degree or extent. It is in kind only, and so long as the kind of motion claimed is produced by the combination described, the combination is protected by the patent.

It follows, therefore, that there was no error in the instruction complained of, and the motion for a new trial must be denied, with costs to the plaintiff, including an attorney fee of ten dollars.

76 Circuit court of the United States for the eastern district of Michigan.

PALMER HAMILTON
and
CALEB IVES & GEORGE B. GREEN.

EASTERN DISTRICT OF MICHIGAN, *ss:*

I, Addison Mandell, clerk of said court, do hereby certify the above and foregoing to be a true copy of the original record of judgment in the above-entitled cause, and of the proceedings on motion for new trial therein, and also of the opinion of the presiding judge of said court on motion for new trial; that I have carefully compared the same with such original, and find the same to be a true transcript thereof, and of the whole thereof; and that the writ of error, assignment of errors, bill of exceptions, and bonds, and judge's opinion, are originals filed in my office in said cause.

In testimony whereof I have hereunto set my hand and the seal of said court, at Detroit, this ninth day of October, A. D. 1873.

[SEAL.] ADDISON MANDELL,
Clerk.

(Indorsement on cover:) No. 280. E. Michigan, C. C. U. S. Caleb Ives and George B. Green, plaintiffs in error, vs. Palmer Hamilton. Filed 18th October, 1873.

THE SUPREME COURT OF THE UNITED STATES.

No. 280

CALEB IVES AND GEORGE B. GREEN, PLAINTIFFS IN ERROR,

vs.

PALMER HAMILTON, DEFENDANT IN ERROR.

IN ERROR TO THE CIRCUIT COURT OF THE UNITED STATES FOR THE EASTERN DISTRICT OF MICHIGAN.

BRIEF FOR PLAINTIFF IN ERROR.

CHAS. J. HUNT,
Of Counsel.

THE SUPREME COURT OF THE UNITED STATES.

No. 280.

CALEB IVES AND GEORGE B. GREEN, PLAINTIFFS IN ERROR,

vs.

PALMER HAMILTON, DEFENDANT IN ERROR.

IN ERROR TO THE CIRCUIT COURT OF THE UNITED STATES FOR THE EASTERN DISTRICT OF MICHIGAN.

BRIEF FOR PLAINTIFFS IN ERROR.

At the June term of the Circuit Court of the United States for the Eastern District of Michigan, eighteen hundred and seventy-one, Palmer Hamilton, the plaintiff below (the defendant in error here) brought an action of trespass on the case upon promises, against the defendants below.

Caleb Ives and George B. Green (the plaintiffs in error here) by filing his declaration as commencement of suit, wherein he alleged that he was the first and original inventor of certain new and useful improvements in saw-mills, and that letters patent therefor were granted unto him by the United States of America, in due form of law, securing to him the full and exclusive right and privilege of making, using, and vending to others to be used, the said improvement in saw-mills, for the term of seventeen years from the fifth day of December, A. D. 1865.

That, from the granting of the said letters patent to the time of the committing of the grievances by the said defendants (the plaintiffs here in error) he made, used and sold his said invention to his great advantage and profit; but that the said defendants (the plaintiffs here in error) did, after the making of said letters patent, and within the said term of seventeen years, make and use his said "improvement in saw-mills," in breach of said letters patent, and to his damage one thousand dollars.

To which said declaration the defendants plead to the jurisdiction.

And, thereupon, the plaintiff (the defendant here in error) entered the default of the defendants (the plaintiffs in error) which default was afterwards set aside, and the defendants (the plaintiffs in error) filed a plea of the general issue, and gave notice of special matters of defense.

First. That, for the purpose of deceiving the public, the description and specification of the patentee in the Patent Office was made to contain less than the whole truth relative to his invention.

Second. That the same, or substantially the same, was previously invented and patented by Isaac Straub, of Cincinnati, Ohio, on the eighteenth day of February, A. D. 1851.

And also by Benjamin Frazee, of Durhamsville, New York, on the eighteenth day of October, 1853.

And also by O. S. Woodcock, of Connersville, Indiana, on the eleventh day of September, A. D. 1855.

And also by John Robinson, of New Brighton, Pennsylvania, on the twentieth day of May, 1856.

And also by Leonard Anderson, of Painesville, Ohio, on the seventeenth day of January, 1860.

And, also, that the said invention was known and used, before the invention of said improvement, by said Palmer Hamilton, and that one Carlisle Whipple, of Detroit, Michigan, had such knowledge of such prior invention.

That, on the 21st day of November, 1873, the said cause was tried, and a verdict rendered in favor of the plaintiff below. (Record, p. 5.)

The bill of exceptions shows (Record, pp. 12–17) that the plaintiff below gave in evidence the letters patent sued upon, which were objected to by the defendants below, on the ground that the claim of said letters patent was for a result, and that the claim was indefinite and uncertain, because it did not claim any particular curve, nor did it show the position in which the curve is to be put, and that it does not show that the upper and lower ends of the curved slide should be perpendicular.

Which objection was overruled by the court, and the counsel for defendants below then and there took an exception to said ruling of the Court, and the said letters patent were admitted in evidence.

"The specification of said letters patent are as follows:

"The schedule referred to in these letters patent, and making a part of the same.

"To all whom it may concern:

"Be it known that I, Palmer Hamilton, of Detroit, in the county of Wayne, and State of Michigan, have invented certain new and useful improvements in hanging and running saws in saw-mills, and that the following is a full, clear and exact description of the same, reference being had to the accompanying drawing, in which

"Figure 1 represents a front elevation of a portion of a saw-mill, with my improvements applied thereto.

"Figure 2 represents a vertical section of the same, with a portion of the saw removed; and

"Figure 3 represents a side view of one of the lower guides of the saw.

"The object of my invention is to impart to the saw of a saw-mill a rocking motion while it is cutting, so that the movement of its toothed edge then assimilates to that of the pit-saw operated by hand. To this end my invention consists of the combination of the saw with a pair of curved guides at the upper end of the saw, and a lever connecting-rod, or pitman, straight guides, pivoted cross-head, and slides or blocks, and crank-pin, or their equivalents, at the opposite end, whereby the toothed edge of the saw is caused to move unequally forward and backward at its two ends, while cutting.

The best mode of embodying my invention in a practical form, with which I am acquainted, is represented in the accompanying drawing, in which the saw is fitted at its upper extremity with a cross-head, *a*, whose ends are pivoted in blocks, *b*, which are arranged to slide in the grooves of a pair of curved guides, CC, that are secured to the frame, D, of the saw-mill.

"The lower end of the saw is connected by a pivot, *e*, with the overhanging end, *f*, of a lever connecting rod, G, which is fitted at a point intermediate between its two ends, *f*, *h*, with a cross-head, *i*. The ends of the cross-head are pivoted in a pair of blocks, *k*, which are arranged to slide in the grooves of a pair of guides, JJ, that are secured to the frame of the saw-mill.

"The lower end, *h*, of the connecting-rod, G, is connected with a crank-pin, *m*, which projects from the face of a wheel, N, secured to a rotating shaft, O, by turning which the saw is caused to move to and fro.

"The feed motion of the saw-mill must, of course, be arranged to cause the log to be moved in the direction of the arrow, *s*, towards the cutting edge of the saw. As the upper guides are concave to the advance of the log, the effect upon the upper end of saw is that, while it is descending, it also moves in the direction indicated by the arrow, *s*, and it continues this movement as it descends until about half of the stroke is accomplished; then, during the remainder of the stroke, it moves in a direction the reverse of that indicated by the arrow, *s*. Moreover, as the connecting-rod is made to oscillate upon the axis of its cross-head, *i*, by the rotary motion of the crank, the end, *f*, which overhangs the cross-head, and is connected with the saw, and that end of the saw are caused to describe a curved line, *t*, which is convex to the advance of the log; so that the lower end of the saw has a curved movement the reverse of that of its upper end. The result is that the toothed edge of the saw rocks upon its work with a movement similar to that of the ordinary pit-saw worked by hand, and the cutting is materially facilitated.

"On the other hand, when the saw rises, its lower end is caused, by the oscillation of the connecting rod, to describe a curve (represented by the dotted line, *t'*) which is concave to the advance of the log, so that the toothed edge is moved away from the wood, or freed therefrom, thereby permitting the log to be fed forward during the whole ascent of the saw, and also permitting the saw-dust to escape after each cut, however deep the cut may have been, whereby choking is effectually prevented

"Having thus described the best mode with which I am acquainted of embodying my improvements, what I claim as my invention and desire to secure by letters patent is:

"Giving to the saw in its downward movement a rocking or rolling motion, by means of the combination of the cross-head working in curved guides at the upper end of the saw, the lower end of which is attached to a cross-head working in straight guides, and pivoted to the pitman below the saw, with the crank-pin substantially as described.

"In witness whereof I have hereunto set my hand, this fourth day of August, 1864.

"PALMER HAMILTON.

"Witnesses:

"WM. JENNISON, JR.

"C. CROUSE."

The plaintiff below also gave in evidence that the defendants were using a combination of the cross-head working in guides composed of straight sides or grooves, set at an angle in the middle, at the upper end of the saw, the lower end of which is attached to a cross-head working in straight guides, and pivoted to the pitman, above the end of the saw; with the crank-pin the same as in the plaintiffs' combination. And, also, that the guides used by the defendants below, at the upper end of the saw, are so used, with the lower end set forward of a plumb-line dropped from the top of the guides.

And the plaintiff below put in evidence the guides used in the mill of the defendants below, at the upper end of the saw, and showed that the same were thirty-four inches in length, and that, if a cord was drawn from the top to the bottom of the face of said guides, the longest distance from the cord to the face of the guide would be but one-fourth of an inch.

The counsel for the defendants below then gave in evidence that the guides used by the defendants below, at the upper end of the saw, are not curved guides, but are composed of two straight guides or slides, and that the lower end of these upper guides are set forward of a perpendicular line, let fall from the top of the slide so far that the whole of the slide was in front of or projected towards the advance of the log, so that the top of the saw, in its downward movement, did not move in the direction of the advance of the log; and also, that the cross-head, to which the lower end of the saw is attached, is pivoted above instead of below the lower end of the saw, and also gave in evidence the patent to Isaac Straub, of Cincinnati, Ohio, dated February 18, 1851, and numbered 7943.

And that the said court did then and there, also in response to the requests of the counsel for the said defendants below to the said court, to charge the jury, further declare and deliver his opinion to the said jury that

The first request is--

"That if the patent of Hamilton is for giving to the saw a rocking or rolling motion, then that Straub's patent was for the same motion, and, therefore, the patent of Hamilton is not valid, because it is not new." To which the judge said:

"As has been already remarked, it is for the court to determine what the patent is for. In overruling defendants' objection to the introduction of the patent in evidence, the court has already decided that the patent is not for giving the saw a rocking or rolling motion. Although that was the object or result to be accomplished, yet is not the thing patented. The thing patented is the combination by which the result named is claimed to be attained. If the patent was as supposed in the request, then the balance of the request would be correct; but the court having ruled that such is not the case, I must decline to give the charge requested. This disposes of the Straub patent, which is the only evidence introduced tending to impeach the novelty of the plaintiffs' patent."

To which last mentioned opinion of the said circuit judge, the said counsel for the said defendants below did then and there, on behalf of the said defendants below, except.

The fourth request is—

"That the claim is for a combination, and that it cannot be infringed by the use of any number of its parts less than the whole, nor by a different arrangement of its parts.

"Granted with the qualification, provided, that such omission or different arrangement of parts in combination, are not merely colorable, and that

notwithstanding such omissions and variations, the combination is not still substantially the same combination as that patented."

To which last mentioned opinion of the said circuit judge, the counsel for the said defendants below did then and there except.

The fifth request is—

"That the claim only covers the combination of the devices shown in the specifications and drawings, and is limited to those devices, and in the particular relation and position therein shown and described, and that resort must be had to the specification and drawings to determine what is meant by the terms used in the claim.

"This request is granted with this added qualification: so far, and so far only, however, as such particular relation and position of the several parts constituting the combination, as shown and described in the specifications and drawings, are material to the combination patented in its practical operation."

To which last mentioned opinion of the said circuit judge, the said counsel for the said defendants below did then and there, on behalf of the said defendants below, except:

The sixth request is—

"That there is no infringement unless the jury find that the defendants use a mill or machine constructed substantially like the one described in the patent, having at the top of the saw curved slides, so placed that the top of the saw, in the first half of its downward stroke, shall move from the log, or, in other words, that it shall fall back from a plumb-line let fall from the top of the slide during that part of the down stroke, while the lower part of the saw is going forward or towards the log, and that in the last half of the downward stroke, the upper part of the saw shall go forward or towards the log, while the lower part is going back from the log, and that the lower end of the saw is pivoted to the pitman above the nodle-pin.

"This request in its first sentence, 'that there is no infringement unless the jury find that the defendants use a machine or mill constructed substantially like the one described in the patent,' is correct, and I so charge you, but the limitations contained in what follows I do not think are in all respects correct, and I therefore decline to give you that part of the request as it is written."

To which last mentioned opinion of the said circuit judge, the said counsel for the defendants below did then and there, on behalf of the said defendants, except.

"In relation to the backward movement of the top of the saw in the first half of its downward stroke, I charge you that if the movement in that respect is backward from a line drawn from the starting point of the downward motion to the point of its termination, the call in the specification in that regard is answered, and that it makes no difference whether that line be a plumb-line or otherwise."

To which last mentioned opinion of the said circuit judge, the said counsel for the said defendants below did then and there, on behalf of the said defendants, except.

The seventh request is—

"That if the slides are not curved there is no infringement.

"Abstractly considered, the proposition contained in this request is correct, and I so charge you; but as applied to this case, I must add an explanation, and that is, that the question is an open one for you to determine, whether the defendants' upper guides are practically curved guides or not. If their form is so near a curve that on that account their practical operation

and effect are the same, or substantially the same, as a curve, then the principle of the curved guides is invaded, and they are practically and substantially curves, notwithstanding that is not their exact mathematical form."

To which last mentioned opinion of the said circuit judge, the said counsel for the said defendants below did then and there, on behalf of the said defendants, except.

The eight request is—

"That if the face of the slides are not placed so that the top and bottom of the slides are in the same perpendicular line, there is no infringement.

"This request is refused, and on the contrary, I charge you that the plaintiff is entitled to the protection of his patent, no matter whether the curved slides be set in one line or another, provided the combination be otherwise complete. It is a mere matter of adjustment, which any competent mechanic, skilled in building saw-mills and adjusting the saw for the most effective service, would readily understand and adopt."

To which last mentioned opinion of the said circuit judge, the said counsel for the said defendant below did then and there, on behalf of the said defendants, except.

The ninth request is—

"That if the slides used by the defendants were made with two straight faces or planes, and so put up, no amount of wear would constitute an infringement.

"This, like the seventh request, is correct in the abstract, and so I charge you, but, as applied so the case now in hand, the jury must consider and examine, and if they can ascertain whether the tendency of the natural wear of the cross-tree upon the slides to bring them more nearly to the curved form, arises from an effort of the cross-tree to follow a curved line, in consequence of the nearness which the form of the guides assimilates or approaches that of a curve; if such is the fact, then the use of curved guides, made so by wear, or more completely so than when first put up, would be an infringement in that respect."

To which last mentioned opinion of the said circuit judge the said counsel for the said defendants below did then and there, on behalf of the said defendants, except.

The tenth request is—

"That there is no infringement unless the jury find that the saw is pivoted to the pitman above the cross-head, such pivoting being part of the combination claimed."

"This charge I give as requested, but with this qualification: unless the jury shall find that the different pivoting adopted by the defendants is a mere evasion. If the result of such different pivoting of the lower end of the saw, by simply reversing the motion of the crank, is the same, and such different pivoting and crank motion was an old device, and known when plaintiff's patent was granted, so that it might have been adopted by him, if he had seen fit, instead of the mode he did adopt, and with the same result—then such different pivoting is an equivalent for the mode patented, and will not protect defendants from the charge of infringement."

To which last mentioned opinion of the said circuit judge, the said counsel for the said defendants below did then and there, on behalf of the said defendants, except.

Assignment of Errors.

The court below erred:

First. That, on the trial of the said cause, the said counsel for the said plaintiffs in error, when the said patent of the said Palmer Hamilton was offered in evidence, objected thereto, for the following reasons:

1st. The claim is for a result or effect, viz: giving to the saw, in its downward movement, a rocking or rolling motion.

2d. The claim is indefinite and uncertain.

(*a*) The claim does not describe any particular curve, as a circle, ellipse, etc.

(*b*) It does not show the position in which the curve is to be put.

(*c*) It does not show that the upper and lower ends of the curved slides are to be perpendicular; and yet they seek to extend the patent over our two straight lines, the lower end of which is set forward of the upper end about three inches.

And the said plaintiffs in error say that the said judge erred in overruling the said objections, and in admitting the said patent in evidence.

Second. The said counsel for the plaintiffs in error also requested the said judge to charge the jury on the trial of said cause:

"That, if the patent of Hamilton is for giving to the saw a rocking or rolling motion, then that Straub's patent was for the same motion, and, therefore, the patent of Hamilton is not valid, because it is not new."

And that the said judge erred in refusing to charge as requested, and in the charge which he did give in regard thereto, viz:

"As it has been already remarked, it is for the court to determine what the patent is for. In overruling the defendants' objection to the introduction of the patent in evidence, the court has already decided that the patent is not for 'giving the saw a rocking or rolling motion.' Although that was the object, or result, to be accomplished, yet it is not the thing patented. The thing patented is the combination by which the result named is claimed to be attained. I see no cause to change that ruling. If the patent was as is supposed in the request, then the balance of the request would be correct; but the court having ruled that such is not the case, I must decline to give the charge as requested. This disposes of the Straub patent, which was the only evidence introduced tending to impeach the novelty of the plaintiff's patent."

Third. The said counsel for the said plaintiffs in error also requested the said judge to charge the jury:

"That the claim is for a combination, and that it cannot be infringed by the use of any number of its parts less than the whole, nor by a different arrangement of the parts."

And that the said judge erred in the charge to the jury which he added thereto, viz:

"Granted, with the qualification, provided that such omission or different arrangement of parts in combination are not merely colorable, and that, notwithstanding such omissions and variations, the combination is not still substantially the same combination as that patented."

Fourth. The said counsel for the said plaintiffs in error also requested the said judge to charge the jury:

"That the claim only covers the combination of the devices shown in the specification and drawings, and is limited to those devices, and in the par-

ticular relation and position therein shown and described, and that resort must be had to the specification and drawings to determine what is meant by the terms used in claim."

And that the judge erred in the charge he added thereunto, which was:

"This request is granted, with this added qualification, so far, and so far only, however, as such particular relation and position of the several parts constituting the combination, as shown and described in the specification and drawings, are material to the combination patented, in its practical operation."

Fifth. The said counsel for the said plaintiffs in error also requested the said judge to charge the jury:

"That there is no infringement, unless the jury find that the defendants use a mill or machine constructed substantially like the one described in the patent, having at the top of the saw curved guides, so placed that the top of the saw, in the first half of its down stroke, shall move from the log; or, in other words, that it shall fall back from a plumb-line let fall from the top of the slide, during that part of the down stroke while the lower part of the saw is going forward, or towards the log; and that, in the last half of the downward stroke, the upper part of the saw shall go forward, or towards the log, while the lower part of the saw is going back from the log, and that the lower end of the saw is pivoted to the pitman above the nodle-pin."

And that the said judge erred in the charge he gave to the jury, which was:

"This request, in its first sentence, that there is no infringement unless the jury find that 'the defendants use a machine or mill constructed substantially like the one described in the patent,' is correct, and I so charge you; but the limitations contained in what follows I do not think are in all respects correct, and I therefore decline to give you that part of the request as it is written. In relation to the backward movement of the top of the saw in its downward stroke, I charge you that if the movement in that respect is backward from a line drawn from the starting point of the downward motion to the point of its termination, the call in the specification in that regard is answered, and that it makes no difference whether that line be a plumb-line, or otherwise."

Sixth. That the said counsel for the said plaintiffs in error requested the said judge to charge the jury:

"That, if the slides are not curved, there is no infringement."

And that the said judge erred in the charge he gave to the jury, which was:

"Abstractly considered, the proposition contained in this request is correct, and I so charge you; but, as applied to this case, I must add an explanation, and that is, that the question is an open one for you to determine whether the defendant's upper guides are practically and substantially curved guides or not. If their form is so near that of a curve that, on that account, their practical operation and effect are the same, or substantially the same as a curve, then the principle of the curved guides is invaded, and they are practically and substantially curves, notwithstanding that such is not their exact mathematical form."

Seventh. The said counsel for the said plaintiffs in error also requested the said judge to charge the jury:

"That, if the faces of the slides are not placed so that the top and bot-

tom of the slides are in the same perpendicular line, there is no infringement."

And that the said judge erred in refusing the said request, and in the charge he gave the jury, which was:

"This request is refused, and, on the contrary, I charge you that the plaintiff is entitled to the protection of his patent, no matter whether the curved slides be set in one line or another, provided the combination is otherwise complete. It is a mere matter of adjustment, which any competent mechanic, skilled in building saw-mills and adjusting the saw for the most effective service, would readily understand and adopt."

Eighth. The said counsel for the said plaintiffs in error also requested the said judge to charge the jury:

"That, if the slides used by the defendants were made with two straight faces, or planes, and so put up, no amount of wear would constitute an infringement."

And that the said judge erred in the charge he gave to the jury, which was:

"This, like the seventh request, is correct in the abstract, and I so charge you; but, as applied to the case now in hand, the jury must consider and examine, and if they can, ascertain whether the tendency of the natural wear of the cross-tree upon the slides, to bring them more nearly to the curved form, arises from an effort of the cross-tree to follow a curved line, in consequence of the nearness which the form of the guides assimilates or approaches that of a curve. If such is the fact, then the use of the curved guides, made so by wear, or more completely so than when first put up, would be an infringement in that respect."

Ninth. That the said counsel for the said plaintiffs in error also requested the said judge to charge the jury:

"That there is no infringement, unless the jury find that the saw is pivoted to the pitman above the cross-head, such pivoting being a part of the combination claimed."

And that the judge erred in the charge he gave to the jury, which was:

"This charge I give as requested, but with this qualification: unless the jury shall find that the different pivoting adopted by the defendants is a mere evasion. If the result of such different pivoting of the lower end of the saw, by simply reversing the motion of the crank, is the same, and such different pivoting and crank motion was an old device, and known when the plaintiff's patent was granted, so that it might have been adopted by him, if he had seen fit, instead of the mode he did adopt, and with the same result—then such different pivoting is an equivalent for the mode patented, and will not protect defendants from the charge of infringement."

Brief of Argument.

I.—It is the duty of the court to construe the the claim of a patent, and to decide as to its ambiguity; to render it certain, and to point out what it is.

Emerson v. Hogg, 2 Blatch., 1.
Hogg v. Emerson, 11 How., 587.
Washburn v. Gould, 3 Story, 123.

II.—That when the claim is for a result in terms, produced by a combination *substantially as described*, is a claim of the described means; or,

rather, of the particular organization and devices described, by means of which the specified result is produced.

Seymour v. Osborne, 3 Fish., 555, 559.
Seymour v. Osborne, 11 Wall., 516, 547.
Burden v Corning 2 Fish., 474 (489).
Leroy v. Tatham, 14 How., 156.
O'Reilly v. Morse, 15 How., 62, 112.
Corning v. Barden, 15 How., 252, 269.
Mitchell v Tilghman 19 Wall 287. 391

III.—In the construction of a patent the whole instrument, embracing the specification and drawings, is to be taken together; and if from this the exact nature and extent of the claim, made by the inventor, can be perceived, the court is bound to give it full effect.

Parker v. Styles, 5 McLean, 44.
Hogg v. Emerson, 11 How., 587.
Union Sugar Refinery v. Mathieson, 2 Fish., 600.

IV.—That the patentee cannot be allowed to prove that any part of the combination is immaterial, or useless.

Vance v. Campbell, 1 Black, 428.
Gill v. Wells, 6 Pat. Off. Gaz., 881 (885).

V.—That the combination is an entirety; that if one of the ingredients be given up, the thing claimed disappears.

Vance v. Campbell, 1 Black, 428.
Gill v. Wells, 6 Pat. Off. Gaz., 881 (885).

VI.—That if an ingredient is substituted for one of the ingredients in a combination, if the ingredient is new, or perform substantially a different function, it is no infringement.

Roberts v. Harden, 2 Cliff., 504.
Gill v. Wells (above quoted).
Turrell v. Illinois Central R R. Co., 3 Fish., 330.

VII.—The inventor of a combination, in improving old machines, cannot invoke the doctrine of equivalents to suppress other improvements which are not merely colorable invasions of the first.

McCormick v. Talcott, 20 How., 402, 405.
Burden v. Corning, 2 Fish, 477, 489.

May it please the Court.

In this case there is no dispute as to the machine used in the mill of the plaintiffs in error, which is a combination of a cross-head, working in guides, composed of straight slides or grooves, set at angle in the middle, at the upper end of the saw, the lower end of which is attached to the pitman below the cross-head, working in straight guides, and the crank pin. It further appears, in this connection, that the guides used by the plaintiffs in error, at the upper end of the saw, are so used with the lower end, set so far forward of a plumb line dropped from the top of the slide, that the whole of the slide is forward of such plumb line, and that the top of the saw, in its downward motion, does not at any time fall back from the advance of the log.

The question in dispute is what is the proper construction of the claim of the patent on which this suit was brought. The defendant in error contending for a broad claim, and such a broad claim as shall not only shut out all subsequent improvements, but one which requires the whole specification to be set aside, while the plaintiffs in error contend that the claim is for a combination, and that it being in terms for a result produced by a combination *substantially as described*, "it should be held to be a claim of the described means; or, rather, of the particular organization and devices by means of which the specified result is obtained."

Seymour v. Osborne, 3 Fish., 559.
Same case, 11 Wallace, 547.

Mitchell v Tilghman, 19 Wall 287. 391

If the claim of the patent is construed as being limited to the construction and mode of operation as set forth in the specification, then it is admitted that there is no infringement; but if the broad claim is allowed which is desired by the defendant in error, it then becomes a question of fact whether the peculiar construction of the machine of the plaintiff does not carry them out of the limits of the patent.

In the various requests to charge the jury, which were modified or refused by the judge, the counsel for the plaintiffs in error brought the question of the interpretation of the claim in question, as will more fully appear as we take up the assignment of errors.

The first assignment of error is, that the court erred in over-ruling the objection of the plaintiffs in error, to the admission of the patent of Palmer Hamilton in evidence. The objection of the plaintiffs in error to the admission of the patent, was that the claim was for a result; and, secondly, that it was uncertain.

The claim being as follows:

"Giving to the saw, in its downward movement, a rocking or rolling motion, by means of the combination of the cross-head working in curved guides at the upper end of the saw, the lower end of which is attached to the cross-head, working in straight guides and pivoted to the pitman below the saw, with the crank pin, substantially as described."

The same question was raised in the first request to charge, and, therefore, these two may be considered together.

This claim is, in its terms, a claim for a result, and there is no doubt but that the result is what the patentee intended to cover by his claim. The ruling of the judge, "that the thing patented was the combination by which the result named is claimed to be attained," was, in its terms, correct, as far as it went; but, from the ruling of the judge in regard to some of the subsequent requests, it is evident that he did not consider the question of the uncertainty or ambiguity of the claim; and, from his subsequent rulings, it appears that he had no definite idea of what was covered by the claim, for the construction placed upon the claim is so broad that it would cover almost any device for producing the motion intended to be produced by the inventor, or any device that contained these elements, although it did not produce the motion or effect claimed by the inventor. "It was the duty of the court to settle the meaning of letters patent, and to decide as to the ambiguity, and to render it certain, and to point out what it is."

Emerson v. Hogg. 2 Blatch., 1.
Washburn v. Gould, 3 Story, 123.

As to the third assignment of error:

That the said counsel for the said plaintiffs in error requested the said judge to charge the jury:

That the claim is for a combination, and that it cannot be infringed by the use of any number of its parts less than the whole, nor by a different arrangement of its parts.

And that the said judge erred in the charge to the jury, which he added thereto:

"Granted, with the qualification, provided that such omission or different arrangement of parts in combination are not merely colorable, and that notwithstanding such omissions and variations, the combination is not still substantially the same combination as that patented."

In this qualification the court went beyond the law, for if anything is omitted from the combination, the combination is not infringed. If a different arrangement of the parts is made, and a different result is produced, then a new machine is produced, and the combination is not infringed.

Vance v. Campbell, 1 Black, 428.
Gill v. Wells, 6 Pat. Off. Gaz., 885.
Turrell v. Illinois Cent. R. R. Co., 3 Fish, 330.

When the patented invention consists in the combination of certain mechanical parts, the use of any of the parts essential to the combination, but less than the whole, is no infringement.

Brooks v. Jenkins, 3 McLean, 432, 453.
Foote v. Silsby, 1 Blatch., 445, 463.
Prouty v. Ruggles, 16 Peters, 341.

As to the fourth assignment of errors:

That the said counsel for the said plaintiffs in error, also requested the judge to charge the jury:

That the claim only covers the combination of the devices shown in the specification and drawings, and is limited to those devices, and in the particular relation and position therein shown and described, and that resort must be had to the specification and drawings, to determine what is meant by the terms used in the claim.

That the said judge erred in the charge he added thereunto, which was:

"This request is granted with this added qualification, so far, and so far only, however, as such particular relation and position of the several parts constituting the combination as shown and described in the specification and drawings are material to the combination patented in its practical operation."

In this portion of the charge the court below, in adding the qualification as to those parts material to the practical operation of the device, went beyond its province, for the court could not make a new patent for him.

When a patentee claims anything as his own, courts of law cannot reject his claim, though he may disclaim it himself. Otherwise, if he sums up the particulars of his invention, he is confined and held to such summary, and his patent must stand or fall by it.

Parker v. Sears, 1 Fish., 93 (99).
Smith v. Downing, Idem. 67 (68 and 69).
Sickles v. Gloucester Manuf. Co., 1 Fish., 222 (238).
Vance v. Campbell. 1 Black, 428.
Gill v. Wells, 6 P. O. G., 881 (885).

The said counsel for the said plaintiffs in error also requested the said judge to charge the jury:

"That there is no infringement, unless the jury find that the defendants use a mill or machine constructed substantially like the one described in the patent, having at the top of the saw curved slides so placed that the top of the saw, in the first half of its down stroke, shall move from the log; or, in other words, that it shall fall back from a plumb line let fall from the top of the slide during that part of the down stroke, while the lower part of the saw is going forward, or towards the log, and that in the last half of the downward stroke the upper part of the saw shall go forward or towards the log, while the lower part of the saw is going back from the log, and that the lower end of the saw is pivoted to the pitman, above the nodle-pin."

And that the judge erred in the charge he gave to the jury, which was: "This request in its first sentence, 'that there is no infringement unless the jury find that the defendants use a machine or mill constructed substantially like the one described in the patent' is correct, and I so charge you, but the limitations contained in what follows I do not think are in all respects correct, and I therefore decline to give you that part of the request as it is written. In relation to the backward movement of the top of the saw in the first half of its downward stroke, I charge you that if the movement in that respect is backward from a line drawn from the starting point of the downward motion to the point of its termination, the call in the specification in that regard is answered, and it makes no difference whether that line be a plumb-line or otherwise."

In this part of the charge the court below went still further in amending the patent, and making it broader than the claim or specification of the patentee, and this is done not by an interpretation of the words of the claim as controlled by the specification, but by interpolating a whole description of the office of the guides. The request to charge, which the judge declined to give, was put in such words as would cover the action of the saw as described in the patent. In the patent it is described as follows: record p. 13. "The feed motion of the saw-mill must, of course, be arranged to cause the log to be moved in the direction of the arrow, *s*, towards the cutting edge of the saw. As the upper guides are concave to the advance of the log, the effect upon the upper end of the saw is, that while it descends it also moves in the direction indicated by the arrow, *s*, and it continues this movement as it descends, until about half of the stroke is accomplished; then, during the remainder of the stroke, it moves in a direction the reverse of that indicated by the arrow, *s*."

In the request to charge the words "shall move from the log" were used, instead of "moves in the direction indicated by the arrow, *s*;" and, to make it more plain, the explanation in the request was added, "or in other words, that it shall fall back from a plumb-line let fall from the top of the slides;" then in the request to charge follows the position of the lower end of the saw during the first half of the downward movement, as described in the patent, which is as "being the reverse of the upper end," and then follows the action of the saw in the last half of the downward movement, as described in the patent, and then comes the pivoting of the saw to the pitman, as shown in the claim.

In the charge given by the judge he says in relation to the backward movement of the top of the saw in the first half of its downward stroke: I charge you that if the movement in that respect is backward from a line drawn from the starting point to the point of its termination, the call in the specification is answered, and it makes no difference whether that line be a plumb-line or otherwise.

But this last part of the judge's charge is an addition to the patent, for

that does not say a word about any line drawn from one end of the slides to the other, but says that "as the upper guides are concave to the advance of the log, the effect upon the upper end of the saw is, that while it is descending, it also moves in the direction indicated by the arrow, *s*. In the drawing, the arrow, *s*, is in front of the saw, pointing towards the toothed edge of the saw, and shows the direction of the advance of the log. In refusing a new trial the judge says 'that when the 'saw' is spoken of, it must have reference to its operative or toothed edge, and the 'upper' and 'lower' ends of the saw must be understood to mean those ends of that edge or side, which in practice, as is well known, always terminates several inches below and above the fastenings or hangings at the respective ends of the saw-plate." If this is true, then the specification should read that the upper end of the toothed or cutting edge of the saw must recede in the direction of the arrow, *s*, and to make the top of this toothed edge recede, of course, the upper extremity of the saw must recede still more. As the direction of the advance of the log is in a horizontal line, and the arrow, *s*, is also horizontal, it follows that if a line is drawn at right angles with that line, that such line will be a perpendicular or plumb-line, and if such line is drawn through the starting point of the saw in its downward movement, then the saw must necessarily fall back from such plumb-line, and if the specification refers to the cutting edge of the saw, then this cutting edge of the saw must move back from a plumb-line or in the direction of the arrow, *s*, during the first half of its downward movement, whatever may be the motion of the lower part of the saw, or otherwise a different movement is given to the saw than is described as the object of the invention and as shown as the mode of its operation.

There is yet another point in the specification that shows that the interpretation given to it by the court below was incorrect, and that is, that the specification goes on to describe the motion given by the lower guides and the lever pitman; the lower guides are straight and perpendicular, and the lever pitman causes the lower end of the saw to oscillate forwards and backwards by the revolution of crank at the lower end of the pitman. The curve described by the lower end of the saw is stated to be the reverse of that of the curved guides at the upper end of the saw, now the lower guides are perpendicular, and the longer axis of the curve described by the lower end of the saw is in the centre of this perpendicular guide, and is also perpendicular; hence, if the upper guide is a curve the reverse of the curve described by the lower end of the saw, then the upper guides must also be perpendicular.

In effect the judge considered this description of the mode of its operation as mere theory, as he says in his refusal of a new trial (Record, p. 26): "It is a statement merely of the patentee's theory in that regard; and even if he was mistaken in that particular, it would not invalidate his patent, because it is immaterial; provided, of course, the entire combination actually produces the result claimed for it," and, as such, set it entirely aside, in his construction of the patent, leaving out of sight the plain rule of law, that the whole specification must be taken together, for a claim to a combination which is defined to be "substantially as described," is thereby limited to the elements which are described in the specification as composing it.

Hales v. VanWormer, 5 P. O. G., 89, 90.
Evarts v. Ford, 5 P. O. G, 58.
United States Steam Gauge Co. v. American Steam Gauge Co., 5 P. O. G., 208.
Hogg v. Emerson, 11 How., 587.

As to the sixth assignment of errors, which is:

That the said counsel for the plaintiffs in error requested the said judge to charge the jury:

That if the slides are not curved there is no infringement.

And that the said judge erred in the charge he gave to the jury, which was:

"Abstractly considered, the proposition is correct, and I so charge you; but as applied to this case, I must add an explanation, and that is that the question is an open one for you to determine, whether the defendants' upper guides are practically and substantially curved guides or not. If their form is so near that of a curve, that on that account their practical operation and effect are the same, or substantially the same, as a curve, then the principles of the curved guides is invaded, and they are practically and substantially curves, notwithstanding that such is not their exact mathematical form.

This, with the ninth request to charge, may be considered together. The ninth request is:

That if the slides used by the defendants were made with two straight faces or planes, and so put up, no amount of wear would constitute an infringement.

And the judge erred in the charge he gave the jury, which was:

This, like the seventh request, is correct in the abstract, and I so charge you. But, as applied to the case now in hand, the jury must consider and examine, and, if they can, ascertain whether the tendency of the natural wear of the cross-tree upon the slides, to bring them more nearly to the curved form, arises from an effort of the cross-tree to follow a curved line, in consequence of the nearness which the form of the guides assimilates or approaches that of a curve. If such is the fact, then the use of curved guides, made so by wear, or more completely so than when first put up, would be an infringement in that respect.

Here are two requests to charge which the judge says are correct in the abstract, yet so qualified as to do away with them entirely. It is not a question here what the amount of the curve is in the guides, in the practical operation of a saw mill, but how much curve must be in the upper guides to produce the result desired and claimed in the patent of Hamilton. In the guides produced on the trial below, from the mill of defendants below, the deflection at the center of the slide, from a line drawn from one end of the slide to the other, was less than a quarter of an inch in a length of thirty-two inches. An arc of a circle of this length, with only this deflection, is almost a straight line, and this slight change in the slide from the old straight slide, is no invention; and a combination of a curve with only this deflection, with the rest of the old mill, is not such a combination as entitles Hamilton to a patent, for there is no invention involved; but this is not what he invented; this is not what he wanted; and this is not what he patented. He patented a combination that would throw the top of the saw backward from the log during the first half of the stroke; and we submit that there can be no infringement by the use of any slides, whether curved or straight, where this result is not produced; and that any instructions from the judge, that this guide used by the plaintiffs in error, consisting of two straight faces set at such an obtuse angle as would produce the deflection of less than a fourth of an inch, was, or could be considered in any way as a curve, was an error; much more when it did not produce the result claimed in the patent to be produced by the use of the curved slide.

The eighth request to charge the jury, was:

"That if the face of the slides are not placed so that the top and bottom of the slides are in the same perpendicular line, there is no infringement."

And that the said judge erred in refusing the said request, and in the charge he gave the jury, which was:

"This request is refused, and, on the contrary, I charge you that the plaintiff is entitled to the protection of his patent, no matter whether the curved slides are set in one line or another, provided the combination is otherwise complete. It is a mere matter of adjustment, which any competent mechanic, skilled in building saw-mills and adjusting the saw for the most effective service, would readily understand and adopt."

In this charge, as in the charge in response to the sixth request, the judge has given to the patent a construction not intended by the patentee, and the same argument against this may be made as against that.

It is not a mere matter of adjustment, but it is a question of the construction to be put upon a patent. Is there anything in the patent to show that the patentee ever intended to put the bottom of the upper slide so far forward that the upper part of the saw should go forward from the starting point in its downward movement, and not backwards, as he states. Did he leave this out for the purpose of deceiving the public; or, was it through ignorance of the effect of placing the slide in the position used by the plaintiffs in error? The patent must cover what is properly described and claimed; but such omissions, and the character of the drawings in reference to this part of the machine, may properly be considered upon the question whether the defendant in error, by his specification and claim, has sufficiently claimed anything more than the *described mode* of operation of the particular mechanism described in his specification, and referred to in general terms in his claim. Can he claim, as the character and *principle* of his invention, as its spirit and substance, as the *very thing* he has invented and patented—a capacity and feature which he has not hinted at, much less explained, in his specification? And can he, under such a claim, and in the absence of all notice to subsequent inventors, or the public, that any such claim was made, recover against an independent inventor, as an infringer, because he has devised, without his aid, and has used, devices unlike those the defendants in error has described, to produce a result not hinted at in the defendants in error's specification? It would seem to be grossly inequitable and unjust to allow such a claim, under such circumstances, and it would be a clear violation of the spirit and principles of our patent law.

CHARLES J. HUNT,
Of Counsel for
Plaintiffs in Error.

IN THE

Supreme Court of the United States.

No. 280.

CALEB IVES AND GEORGE B. GREEN,
Plaintiffs in Error,

vs.

MILTON A. HAMILTON, Aministrator of Palmer Hamilton, Defendant in Error.

H. H. WELLS,
JNO. H. B. LATROBE,
For Defendant in Error.

Jos. L. Pearson, Printer, 9th and D streets, Washington, D. C.

IN THE

Supreme Court of the United States.

CALEB IVES AND GEORGE B. GREEN,
PLAINTIFFS IN ERROR,
vs.
MILTON A. HAMILTON, ADMINISTRATOR
OF PALMER HAMILTON, DEFENDANT IN ERROR.
} No. 280.

STATEMENT.

Palmer Hamilton brought a suit at law in the Circuit Court of the United States for the Eastern District of Michigan, against the plaintiffs in error, Caleb Ives and George B. Green, to recover damages for the infringement of letters-patent granted to the said Hamilton by the United States on the 5th of December, 1865, for the original invention of a new and useful improvement in saw-mills.

The cause was tried before a jury on the 22d of November, 1872, upon a plea of the general issue, with notice of certain special matter, to wit:

1st. That the defendants would prove that, for the purpose of deceiving the public, the description and specification by the patentee was made to contain less than the whole truth relative to his invention.

2d. That substantially the same improvement was invented and patented February 18, 1851, by Isaac Straub; and also by Benjamin Frazee, patented October 18, 1853; and also by O. S. Woodcock, patented September 11, 1855; and also by John Robinson, patented May 20, 1856; and also by Leonard Anderson, patented January 17, 1860; and that the thing patented was not first invented by the said Palmer Hamilton, but was publicly known and used prior to the time when he alleges it was invented by him.

Upon the issues thus made the jury found a verdict for the plaintiff and against the defendant, whereupon a motion for a new trial was made, argued, and denied.

See pp. 5 to 10 inclusive, Record.

Whereupon the plaintiffs in error tendered their bill of exceptions, which was signed by the Hon. Jno. W. Longyear, District Judge, holding the Circuit Court, which was filed in the clerk's office on the 14th of May, 1873.

p. 18, Record.

The bill of exceptions is found on pp. 12 to 17 inclusive, Record.

The assignment of errors is found on pp. 18 to 20 inclusive, Record.

By an examination of the bill of exceptions it will be observed that no question was made nor any proof offered on the trial under either of the special matters contained in the plaintiffs in error's notice, excepting that one alleging that the same invention was patented by Straub, February 18, 1851. All other special matter referred to in the notice is, therefore, out of the case.

The improvement patented to Hamilton consisted "of the combination of the saw with a pair of curved guides at the upper end of the saw, and a lever connecting-rod or pitman, straight guides, pivoted cross-head and slides on blocks and crank-pin, or their equivalents, at the opposite end, whereby the toothed edge of the saw is caused to move unequally forward and backward at its two ends while cutting. * * Thus giving to the saw in its downward movement a rocking or rolling motion." The object being to impart to the saw of a saw-mill a rocking motion while it is cutting, so that the movement of its toothed edge assimilates to that of the whip- or pit-saw operated by hand.

pp. 12, 13, 14, Record.

The general terms above employed in describing the

invention and the object to be secured by it, are sufficiently clear to show what the thing was. It is, however, necessary as well to obtain a clear idea of the advantages sought to be gained by the improvement.

If the toothed or cutting edge of the saw in its practical working simply hung plumb, and in its downward motion moved only in that line, it would be impossible to perform any practical cutting, for the first tooth striking the wood would simply be forced downwards through it while all the succeeding teeth would only follow in the cut made by the first one, all being in precisely the same line. To overcome that difficulty there has always been given to the upright saw what is denominated rake or overhang, which is the inclination of the top of the upright saw forward of a plumb line.

There is a limit to which this rake or overhang of the saw can be carried consistent with its effective working. While there must be some there must not be too much rake. The degree of it is a matter to be determined exclusively by the skill and experience of the mechanic. In small soft logs, with plenty of power, he may give to his saw extreme rake, while with little power or hard or large logs to be sawed, the rake must be very slight.

This rake or overhang may be secured by inclining the slides at the upper end of the saw forward, or, if the slides are plumb, by carrying the front edge of the saw at the top forward, and ordinarily the saw is provided with more than one hole—one forward of the other—or a slotted hole for this purpose.

In sawing, *under our method*, the cutting begins at the bottom of the log, if its end be square, and the first cutting is done by the bottom or lowest working tooth of the saw. The necessity of rake begins with the second cutting tooth. Each tooth after it must have a rake greater than the tooth immediately next preceding it, so that, therefore, practically, the real object to be secured is not so much the rake of the second working tooth but that the rake

through the whole progress of the saw shall be such that when the downward stroke is completed there shall be sufficient, but not too much, rake to the last working tooth, which is near the top of the saw.

What has before been said as to the rake of the saw is common to all upright saws, and this invention claims nothing new on that subject but takes that, as it does the method of hanging the slides, of filing the teeth with much or little hook, the method of applying the power, and various other matters well known, as they are commonly in use, leaving the adjustment of the same to the skill of the mechanic.

The thing designed to be secured by this invention is, then, rake and other matters being properly adjusted, a rolling motion of the saw in its downward progress through the log, by which, while one end of the cutting portion of the saw is advancing in its motion towards the log, forward of a straight line drawn from the point of the beginning to the point of completion of the down cutting stroke, the other is falling back from such a line. It is not the effect, however, which is patented, but the means by which it is produced; it is giving to the saw in its downward movement a rocking or rolling motion by means of the combination of the cross-head working in curved guides at the upper end of the saw, the lower end of which is attached to a cross-head working in straight guides and pivoted to the pitman below the saw, with the crank-pin, substantially as described.

The motion of the saw operated under this patent is a three-fold compound motion. The first motion common to all upright saws is an upward and downward motion, imparted at both ends of the saw. The remaining two motions are peculiar to this patent, and are a rolling motion in towards the log and a rolling motion from the log. The distinctive character of the motion is communicated to the upper half of the saw by curved slides, and to the lower half of it by a crank and lever pivoted pitman, both operating at the same time.

During the first half of the downward motion the upper end of the saw is, by reason of the curve in the slides at the top, drawn from the log; for that portion of the saw does then no cutting, but during the same period of downward motion the lower end of the saw is, by reason of the crank motion at the bottom and the pivoting of the lower end of the saw to the overhang of the pitman or portion thereof extending above the lower cross-head, thrust into the log, the lower half of the saw doing the cutting during that period. During the second half of the downward motion the upper end of the saw is, by reason of the curve in the slide at the upper end, drawn into the log, and that portion of the saw is then doing the cutting; but during the same period, the last half of the downward motion, the lower end of the saw is drawn from the log by reason of the crank and pivoting to the overhang of the lever pitman when at the bottom, the downward motion of the saw is then complete.

The saw must now move upwards to the point from which it started to be ready for another process of cutting through the log. While it is thus ascending both ends of the saw should be moved from the log that the cutting surface of the teeth may no longer come in contact with it. It will be remembered that when the saw was descending, the motion of its two ends as to the log were adverse, when one was thrust in the other was drawn back; but in the ascending motion of the saw those movements are reversed and at the same instant that the lower end of the saw is moved from the log the upper end is also moved from it; so, also, when the upper end is carried in, the lower end in ascending is carried in also.

That is accomplished in this way: While the upper end of the saw is making one entire journey up and down it moves only on the same arc of a circle, once up, once down the same; but the crank to which the lower end of the saw is by the pitman attached sweeps once entirely around a circle.

We are now able to understand the true scope of the invention. The advantages obtained by this rocking or rolling motion thus given to the saw are very briefly these: The saw in cutting strikes the wood on an easy curve instead of a sharp angle, the wood thereby is cut more easily, a greater number of teeth are cutting at the same time, or what is the same thing, a greater surface of the log is presented to the working teeth of the saw, the power required to drive the saw is greatly diminished, the tendency to force the log from its position is lessened, the pounding motion ordinarily accompanying the operation of an upright saw ceases, and the saw-dust is left free to fall at once without clogging or interfering with the progress of the saw, as in the old method; but it is enough to say that these advantages are so palpable, well known, and considerable, that the defendants below, undertook to secure them to themselves and did secure them in fact by the methods to which they resorted. They had a right to secure, if they could, the same effects, provided only they did so by other combinations or processes and not by an infringement upon the Hamilton patent.

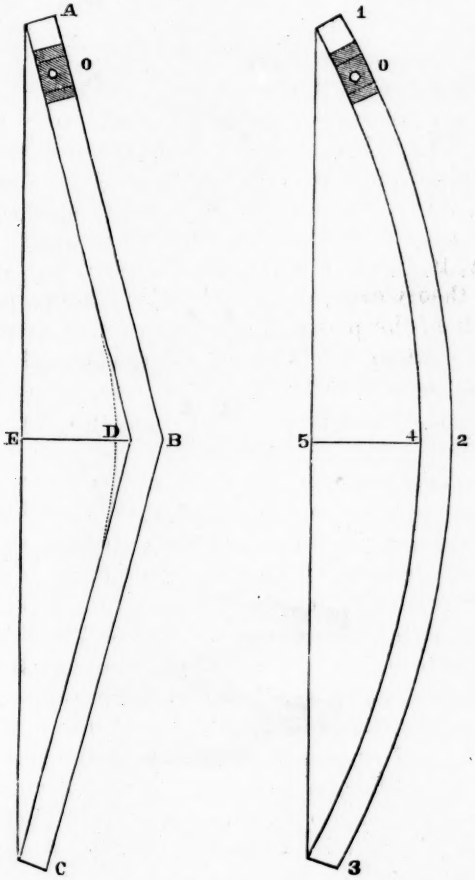
In order to determine whether there was in fact an infringement by them, it is necessary only to consider the combinations and processes to which they resorted, which were in brief these, to wit: a cross-head working in straight guides and pivoted to a pitman above the end of the saw with the crank at the lower end of the saw; in short, the same identical combination at that end which is used by the patentee.

See p. 14, Record, 3d paragraph.

At the upper end of the saw there is a plain, manifest attempt made to evade the Hamilton patent by the substitution and use of "a combination of the cross-head, working in guides, composed of straight sides or groves set at an angle in the middle."

p. 17, Record, commencement 3d paragraph.

How manifest the evasion is will be apparent when we compare the slides used by the plaintiffs in error with those used under the Hamilton patent. Hamilton's slide is the arc of a circle, thus represented by the figures 1, 2, 3, 4.



The figure A, B, C, D, is the slide used by the plaintiffs in error. The distance from 1 to 3 in the first figure,

and from A to C in the second figure, being the length of the slide, is the same in both cases, being thirty-four inches. The distance in the first figure from 4 to 5 being the deflection of the curve from a straight line, is precisely the same as the distance in the second figure from D to E, being in that figure the deflection of the angle from a straight line. O in each figure is a block in which the cross-head carrying the saw is pivoted; that block moves up and down in the groove of the respective slides carrying the cross-head with the saw attached to it. When O in figure 1, 2, 3, passing downwards from 1 to 2, has reached the centre of the slide (2), we find that it has moved precisely the same distance away from a straight line that the slide O has in figure A, B, C, when it reaches the point B. Thus far, then, in theory even, the only variation in the motion of the block in the plaintiffs in error's straight slides and the defendant in error's curved slides is that the former has passed over a perfectly straight line while the latter passes through a slightly curved line, both reaching the same point.

But this difference is, however, only in theory and not real. In practice it would be utterly impossible to use a block running through perfectly straight slides, diverging at the centre from a straight line, as in theory is done in the slide of the plaintiffs in error. This will be seen by a moment's reflection. The block itself must be long enough to give steadiness to the motion; it must fit as tight in the slides as is consistent with freedom of motion, the tighter the better, so that only a free movement is possible. Now, it is manifest that if the block O fits closely to the slide, or even reasonably so, while it can pass freely from A to B, when it reaches that point it can never go beyond. In short, its parallel straight lines can never pass the angle made at B, either ascending or descending.

One of three things, therefore, inevitably results when such an attempt is made:

1st. The angle where the two straight lines meet D must be either cut away in the first instance when the slide itself is made, or worn away before the machine can become effective;

Or, 2d. The outer edge of the block at both ends must be either thus cut away or rounded off sufficiently to enable it to pass the point where the two straight surfaces of the slide intersect;

Or, 3d. The block itself must be so much smaller than the groove or channel of the slides that it can pass said point of intersection;

And, finally, whichever of the three things above mentioned is done, the motion thereby secured to the block, the cross-head, and the end of the saw pivoted to it will be in a curved line from A to C, being the precise object and purpose practically and easily secured by the Hamilton patent.

The last two of the three devices mentioned above are practically impossible. The plaintiffs in error are, therefore, driven to the necessity of making their guides so near those made by the defendant in error as that the difference between them cannot be detected by the human eye, but only by instruments; and this they actually do, for we find by the bill of exceptions that "the plaintiff below gave evidence tending to show that the form of the upper guides used by the defendants (plaintiffs in error) were mechanically equivalent in the actual operation of sawing to the form of the upper guides in the patent of the defendant in error. That the difference in form was not really observable to the eye without the aid of instruments, and that the tendency in actual use was to wear the guides used by the plaintiffs in error to the form of a curve."

See p. 14, Record, 5th paragraph.

Another demonstration of the identity of the motion and effects secured by the two methods, the Hamilton

patent and the combination used by the plaintiffs in error to evade it, is this, as shown on the trial below and in the working of the models: that a pencil adjusted so as to trace upon a plain surface the precise line of motion followed by any one of the working teeth of the saw will trace a line identical in every particular, whether the slide or guides used at the upper end of the saw be the Hamilton curved guides or the plaintiffs in error's straight guides thus assimilated to a curve.

"The plaintiff also gave in evidence, by working models, tending to show that the motion given by the machine of the plaintiff (the defendant in error) to the teeth of the saw in actual operation in sawing was substantially the same as given by the machine used by the defendants (the plaintiffs in error)."

p. 14, Record, 6th paragraph.

The jury, by their verdict, found that the plaintiffs in error had infringed the patent of the defendant in error by the use of a combination of guides described as being substantially the same as those used by the patentee.

Brief.

The errors assigned are—

1st. That the court overruled an objection made by the plaintiffs in error to the admission of the Hamilton patent in evidence before the jury.

The grounds of objection to such admission were, first, that the claim or patent is for a result, "giving to the saw in its downward movement a rocking or rolling motion;" second, that the claim was indefinite and uncertain.

Three particulars in which its alleged uncertainty consisted were pointed out, viz: that it does not describe the particular curve which the guides were to have; it did not show the position in which the curved slides were to be put, whether perpendicular or otherwise, and "it did

not show that the upper and lower ends of the curved slides are to be perpendicular, and yet they seek to extend the patent over two straight lines, the lower end of which is set forward of the upper end about three inches."

The first of these objections seems to us entirely untenable. The allegation that the claim of the defendant in error was for a result or effect, "giving to the saw in its downward movement a rocking or rolling motion," is shown to be unfounded by the patent itself. The object to be secured by his invention was a rocking motion of the saw. "My improvement consists of the combination of the saw with a pair of curved guides at the upper end of the saw and a lever, connecting-rod, or pitman, straight guides, pivoted cross-head, and slides or blocks and crank-pin or their equivalents at the opposite end, whereby the toothed edge of the saw is caused to move unequally forward and back at its two ends while cutting."

p. 13, Record.

The combination in the first clause of the language quoted is the subject patented; the words that follow "whereby" describe the effect produced by that combination. Then follows a description of the mode of operation, and then, on page 14, the patentee states his claim and for what he desires to secure letters-patent. His language is: "Giving to the saw in its downward movement a rocking or rolling motion by means of the combination of the cross-head working in curved guides at the upper end of the saw," &c. The plaintiffs in error, in the allegation we are now considering, assume that Hamilton's claim for his invention stopped at the word "motion." They omit all that follows—"by means of the combination," &c.

The true distinction under the patent law between a patent for a mere process or effect and a patent for a cer-

tain combination of old and new machinery by which a process or effect is produced, is well understood.

"When the supposed invention is not a mere function or abstract mode of operation separate from any particular mechanism, but a function or mode of operation is embodied in mechanism, designed to produce a particular effect, it will be a machine in the sense of the patent law."

Blanchard vs. Sprague, 3d Sum., 535, 540.

It is for the discovery or invention of some practicable method of producing a certain result or effect that a patent is granted, and not for the result or effect itself.

Corning et al. vs. Burden, 15 Howard, p. 252; per Grier, J., see p. 268.

"Where the claim immediately follows the description of the invention it may be construed in connection with the explanations contained in the specifications, and when it contains words referring back to the specifications," (in this case "substantially as described" were the words) "it cannot properly be described in any other way."

Seymour vs. Osborne, 11 Wallace, 516–547.

Which is precisely what this patent does. It secures a certain motion, certain effects by the combination of certain specified and well-known elements. The combination is new and produces useful effects, and the patentee's claim and patent is for that combination producing those effects.

The second objection relates to uncertainty in the claim or specification of the patentee. Three particulars of uncertainty are pointed out, but they may well be considered together. It is manifestly the requirement of justice and fair dealing, as it is of the patent law, that the patentee should describe his invention with such degree of certainty and particularity as to distinguish his invention from all others, and as will enable one skilled in the art of which it is a branch to construct it.

Teese vs. Phelps, McAllister, 48.

Allen vs. Hunter, 6 McL., 303.

Judson vs. Moore, 1st Fisher Pat. Cas., 544.

Gray vs. James, 1st Pet. C. C., 394.
Brookes vs. Bicknall, 3d McL., 250.
Treadwell vs. Parott, 5th Blatch. C. C., 369.
Singer vs. Walmsley, 1st Fish. Pat. Cas., 558.
Mowry vs. Whitney, 14 Wall., 620.

In other words, the specifications must be so definite as to inform the public what the inventor claims, and to enable the skilled workman to construct it. Nothing more is required.

There is no pretence whatever that that is not done by Hamilton's specifications, because those skilled in the art have been continually from this claim and specification constructing and successfully employing the machine. The two allegations of indefiniteness to which the objection is confined are, that the degree of curvature of the slides and the position, as to whether plumb, or backward or forward of a plumb line, in which they shall be set, are not definitely described. This, however, is so for the simple reason that the degree of curvature and the line upon which the guides were to be set is not fixed or certain, but both are left necessarily to depend upon the judgment and experience of the mechanic. They are thus left indefinite, because more definiteness or certainty is not necessary to the successful employment of the patent or the construction of the machine.

The degree of curvature of the slides depends upon the extent, whether greater or less, of inward or backward motion which is desired to be given to the saw. Whether the guides are set plumb depends upon the judgment of the mechanic, and whether or not he desires by setting the bottom forward to increase the rake of the saw, or setting them plumb to secure the same result by hanging the top of his saw further forward. Hamilton himself, from the very outset, in the use of his patent, not unfrequently did set the bottom of his guides half an inch forward of a plumb line.

p. 14 of Record, 6th paragraph.

A more definite description in this particular would have subjected the patentee to an insurmountable difficulty, for it would doubtless have been contended, if he had described the exact curvature and had required that his guides should be set plumb, that any deviation in the curve or in the change of the position of the guides could have been resorted to as an evasion without a technical infringement of the patent. The law did not require the inventor to subject himself to such an unreasonable hazard.

This court said, in Winans vs. Denmead, 15 How., at page 341:

"While it is undoubtedly true that the patentee may so restrict his claim as to cover less than what he intended, excluding all other forms, though they also embody his invention, yet such an interpretation should not be put upon his claim if it can fairly be construed otherwise, and this for two reasons:

"1st. Because the reasonable presumption is that, having a just right to cover and protect his whole invention, he intended to do so.

"2d. Because the specifications are to be construed liberally, in accordance with the design of the Constitution and patent laws of the United States to promote the progress of the useful arts. * * *

"It is generally true that when a patentee describes a machine, then claims it as described, that he is understood to intend to claim, and does by law actually cover, not only the precise form he has described, but all other forms which embody his invention."

The same thing was decided by this court in Klein vs. Russel, 19 Wall., 433. "Specifications are to be taken in the sense in which the common knowledge of persons skilled in the art would understand them."

Any skilled constructor of saw-mills would certainly understand that the degree of curvature of the slides is not positively fixed and cannot be. He would also as well understand that while the guides are to be placed with their concaved face towards the saw and in a gen-

eral upright condition, a slight inclination of the bottom forward, is quite as much within the contemplation of the patent as a perfectly plumb position would be.

Where a particular effect or purpose in machinery is a part of the invention and the effect may be produced in several modes, it is sufficient for the patentee to state the modes which he contemplates as best, and his claim will not be void as too vague or comprehensive, although he claims the variations from those modes as being equally his invention without describing the manner of producing those variations.

Carver vs. Braintree Manuf. Co., 2 Story, 432–440.

When the inventor claims a machine he must explain the principles and contemplated modes of operation which distinguish it from other inventions, but he need not specify such well-known substitutes as any expert fully understands will accomplish the same function.

See Seymour vs. Osborne, 11 Wall., 516, 565–6.

We suppose that in the last objection urged by the plaintiffs in error in their assignment of errors, page 18, and which is therein distinguished by the letter "c," there is a misprint, by inserting the word "not" in the first line—"It does *not* show the upper and lower ends of the curved slides to be perpendicular,"—for as it stands, it seems to be unintelligible. We suppose the purpose is to state this objection in this way: "The specification shows that the curved slides are to be placed perpendicular, and yet they seek to extend the patent over slides, the lower end of which is set forward of the upper end three inches."

Assuming that that is the true meaning of the objection, we say that our claim does not require that the curved guides should be set either plumb or backward or forward of a plumb line, and that any device or evasion which employs substantially such curved guides or their equivalents at the upper end in combination at the

lower end of the saw with the instrumentalities mentioned by the patentee, or their equivalents, is an infringement, and this is precisely what we understand to be the doctrine of the whole current of authorities; and we say, therefore, that there was no error committed by the court below in overruling the objections made by the plaintiffs in error and admitting the patent itself in evidence.

II.

The plaintiffs in error assign eight errors in the instructions given or refused to the jury.

The first is as follows:

1st. That if Hamilton's patent is for giving the saw a rocking or rolling motion, then there was no novelty, because Straub's patent did the same. That request for instruction was refused by the court, on the ground that such was not the thing patented, but that the thing patented was the "combination by which the result named is claimed to be attained." That question we have already considered herein when replying to the first error assigned by the plaintiffs in error. It is a false assumption to say that the rocking motion—the effect—is patented instead of the combination by which the effect is produced. It is certain there was no error in this respect.

2d. The second error assigned is a modification added by the court to the instructions requested by the plaintiffs, that Hamilton's claim is for a combination and cannot be infringed by the use of any number of the parts less than the whole, nor by a different arrangement of the parts. That instruction the court gave, but added this qualification: "provided that such omission or different arrangement of parts in combination are not merely colorable, and that notwithstanding such omissions and variations the combination is not still substantially the same combination as that patented."

It is difficult to see how an argument can be made to sustain the allegation of error in that charge, but the fallacy in such an argument is apparent when we state its result in an embodied form as follows:

This is a claim for a combination; it cannot be infringed by the use of any number of its parts less than the whole, nor by a different arrangement of the parts; though such omission or different arrangement in combination is merely colorable, and notwithstanding such omission and variation the combination is substantially the same as patented.

"Mere colorable differences or slight improvements cannot shake the rights of the original inventor."

Odiorne vs Winkley, 2d Gall., 51.

"If the defendants have taken the same general plan and applied it for the same purpose, although they may have varied the mode of construction, it will still be substantially and, in the eye of the patent law, the same thing."

McCormick vs. Seymour, 2d Blatch., 240.

A mere colorable or slight alteration of a machine or a change in its proportions gives no ground for a patent, nor can it shelter from the consequences of an infringement. The question is whether the principle of the two machines is the same.

Broocks vs. Bicknell, 3d McL., 262.

If the defendants use a substantial part of the invention patented, though with some modifications of form or apparatus, it is a violation of the patent right.

Wythe vs. Stone, 1st Story, 273.
Carver vs. Braintree Manf. Co., 2d Story, 432.
Davis vs. Palmer, 2d Brock, 299.
Smith vs. Higgins, 1st Fish. Pat. Cas., 537.
Lowell vs. Lewis, 1st Mas., 182, 191.

Mere formal alterations of a combination in letters-patent do not constitute any defence to the charge of in-

fringement, as the inventor of a combination is as much entitled to suppress every other combination of the same ingredients to produce the same result, not substantially different from what he has invented and caused to be patented, as the inventor of any other patented improvement.

Rees vs. Gould, 6 Fisher Pat. Cas., 106–112, Clifford, citing Seymour vs. Osborne, 11 Wall., 555.

Union Paper Bag Co. vs. Nixon, 6 Fisher Pat. Cas., 402.

Graham vs. Mason, 5 Fish. Pat. Cas., 1–11.

Conover vs. Roach, 4 Fisher Pat. Cas., 12.

It would be hard to conceive a perversion of the law more in violation of the authorities cited above than such a charge as that of the plaintiffs in error's exception embodies. Combinations, the pretended new elements of which are merely colorable alterations, are the very subjects against which the law punishing infringements is aimed. They are evasions, and as punishable as the boldest infringements.

The modification of the instruction, as given by the court, was not only a correct statement of the law, but its expression was called for by the case itself, inasmuch as there was testimony to show that the device employed by the plaintiffs in error was identical in appearance, performed the same office, and produced the like results as Hamilton's patent, the changes and modifications being merely colorable and resorted to for the purpose of evasion.

There was no error, then, in that instruction.

III.

The third allegation of error is predicated upon a qualfication added by the court to the charge as requested by the plaintiffs in error. The plaintiffs in error asked the court to instruct the jury that the claim only covers

the combination of the devices shown in the specifications and drawings, and is limited to those devices and to the particular relation and position therein shown and described, and that resort must be had to the specifications and drawings to determine what is meant by the terms used in the claim. The court added: "This request is granted, with the additional qualification, so far, and so far only, however, as such particular relation and position of the several parts constituting the combination, as shown and described in the specifications and drawings, *are material to the combination patented in its practical operation.*"

The precise point involved in this objection is this: The court told the jury the patent only covered the device shown by the drawings, claim, and specifications, and that to determine what was patented reference must be had to such parts of the specifications and drawings only as are material to the combination patented in its practical operation; in other words, that which was merely surplusage and entirely immaterial was unimportant. The objection to the charge seems to comprehend the assertion that if in the drawings there was, accidentally or by design, an immaterial representation or statement not covered by the claim in so many words, that for that reason the claim itself would be bad, or the character of the invention be radically changed.

In Hogg vs. Emerson, 6 How., 437, and same case in 11 How., 587, and Turrell vs. M. S. & N. J. R. R. Co., 1 Wall., 491; Brookes vs. Fiske, 15 How., 215, and many other cases, it was held that the drawings, as well as the entire specifications, might be referred to in explanation or elucidation. Now, this objection seeks or assumes to add to the law thus settled the farther proposition that for the same purposes and to defeat the patent, we are bound to refer in the same degree to the drawings, specifications, and positions of the parts in matters, parts, and particulars immaterial, as well as those that are material. No authority or reason can be shown for any such rule; but

the authority and reason are ample to sustain the limitations contained in the Judge's charge.

In Waterbury Brass Co. vs. Miller, 9 Bl., C. C., 77, the court say: The words "substantially as described and shown" in the claim relate only to material features of the combination specified.

The rule in regard to what constitutes an infringement seems to be well laid down in Curtis on Patents, sec. 322, quoted in the opinion of the Supreme Court in the case of Burr vs. Duryea, 1 Wallace, 573.

"An infringement invokes substantial identity, whether the identity be described by terms 'same principle,' 'same modus operandi,' or any other. It is a copy of the thing described in the specification of the patentee, either without variation, or with such variations *as are consistent with* its being in substance the same thing. If the invention of the patentee be a machine it will be infringed by a machine which incorporates in its substance and operation the principle of the invention; that is, by an arrangement of mechanism which performs the same service or produces the same effect in the same way or substantially the same way."

Burr v. Duryea, 1 Wallace, 531–573.

In construing contracts between parties, or statutes, or indictments, the one universal rule is to reject that which is merely surplusage and immaterial. Why should a different rule be applied to the drawings and specifications of a patent?

What was the real scope and purpose aimed at by the plaintiffs in error by the assertion in the various forms in which it was done of that unauthorized proposition?

It was this. The plaintiffs in error contend that by the drawings which accompanied the specifications, the curved guides at the upper end of the saw were exhibited as being placed on a plumb line, and that, therefore, it was an express and substantial part of the invention patented that the guides should be thus placed; and that, therefore, carrying the bottom of the guide forward

of a plumb line, three inches or less, as they did, relieved them from their violation and evasion of the Hamilton patent!

But as we have before seen, Hamilton did not describe that as a part of his patent, nor as the position in which the guides were to be placed; moreover, he did not place them so in fact nor did he anywhere rely upon such accidental manner of placing the guides as material or important. The court, therefore, practically instructed the jury that such a drawing, if it in fact existed, in which the guides were exhibited as on a plumb line, did not make such a location a material part of the patent.

IV.

The next error assigned is, that the court did not give as requested, but did modify the following request for instruction:

That there is no infringement unless the jury find that the defendants use a mill or machine constructed substantially like the one described in the patent, having at the top of the saw curved slides, so placed that the top of the saw in the first half of its downward stroke shall move from the log, or in other words, *that it shall fall back from a plumb line let fall from the top of the slide* during that part of the downward stroke when the lower part of the saw is going forward or towards the log, and that in the last half of the downward stroke the upper part of the saw shall go forward or towards the log while the lower part of the saw is going back from the log.

That instruction so asked for embodied several things: first, that there was no infringement unless the defendants used a mill or machine constructed substantially like the one in the patent. That portion of the instruction the court gave without modification. Second, that there was no infringement unless the machine used by them having at the top of the saw curved guides so placed

that the top of the saw in the first half of its downward stroke shall fall back from a plumb line let fall from the top of the slide during that part of the down stroke, while the lower part of the saw is going forward. This the court refused to give as asked, but modified. Third, that the lower end of the saw is pivoted above the noddle-pin. That was also refused.

Inasmuch as the third subdivision of this instruction is itself made distinctly the subject of a later instruction and objection, it need not be considered now.

We have, then, as the substantive subject of this request for instruction and objection, this proposition: that there is no infringement unless the guides are so placed as that the upper end of the saw in the first half of its downward motion shall fall back from a plumb line let fall from the top of the slides, while the lower part during the same period is going forward. In other words, the plaintiffs in error assume that it is a vital element of the motion of the saw under the Hamilton patent, that in the first half of its downward motion the upper end of the saw shall fall back from a plumb line dropped from the top of the slides.

The judge, refusing to give that portion of the charge, said he did not think the request, in all its limitations, correct, and "I therefore decline to give you that part of the request as it is written. In relation to the backward movement of the top of the saw, in the first half of its downward stroke, I charge you that if the movement in that respect is backward from a line drawn from the starting point of the downward motion to the point of its termination, the call in the specification in that regard is answered, and that it makes no difference whether that line be a plumb line or otherwise."

The whole argument for the plaintiffs in error on this point turns upon the assumption which we have before considered, improperly made by them, that the guides must be set plumb. It is manifest, however, that, no

matter how the guides are set at the upper end of the saw, inasmuch as that end of the saw, in relation to its backward and forward motion, follows exactly the curve of the guide, when it has passed over one-half of the curve it will be necessarily as far back of a plumb line let fall from the starting point as the inclination of the curve is. When the same end of the saw, following in the same manner the curve in the guide, proceeds on the last half of its motion, it will advance towards the same plumb line in precisely the same ratio that it before receded from it, and the call of the patent is exactly answered.

Whether the upper end of the saw, in the first half of its downward motion, falls back of a *plumb* line let fall from the upper end of the slide or not, depends solely upon whether the bottom of the slide is set so far forward that the centre of the curve of the guide is forward of a plumb line or not.

As we have before seen, the motion given under the Hamilton patent to the upper end of the saw is first backward from the starting point, then forward towards the same point, and the charge requested in this particular by the plaintiffs in error was simply an attempt to ingraft upon the Hamilton patent a requirement that the slides should not only be placed plumb, or the bottom not forward of a plumb line, but they also maintain and ask the court to instruct the jury that any slide the bottom of which is placed so far forward as that the centre of it is on or forward of a plumb line is not an infringement. No such principle or limitation is embodied in the Hamilton patent, but the precise position of the slide, whether backwards or forward of a plumb line, is left indefinite; and the patentee claims that any combination of the curved guides, with the lever pitman, pivoted cross-head blocks or slides, and crank-pin at the bottom, whereby this rocking motion is produced, is an infringement.

If that motion is secured, it is immaterial whether at any time it goes back of a plumb line, but it always

must go backward of a line drawn from the top to the bottom of the slides, as that is precisely what we understand the Circuit Court to have said.

In this connection it is necessary to remember that owing to the rake or forward inclination which the top of the saw necessarily has, the toothed edge of the saw is constantly advancing towards the log from the beginning to the end of the downward stroke; and that as to the top of the saw, the backward motion which is communicated by following the curved slides might not overcome or take out all of the rake, and, therefore, not actually at any period positively move backwards from the end of the log. Still that would in no sense change the character of the motion, for, as measured by a fixed point, the saw in a given period, by reason of the rake, advances in the proportion of four to one while it falls back in the relation of two to one or one-half. But inasmuch as the same process of advancing and retiring is going on at the lower end of the saw, we ought to have at the middle of the stroke the cutting edge of the centre working tooth of the saw with comparatively little rake. It will thus be seen that it is a matter of no consequence whatever whether or not the motion is back of a plumb line, but it must be, as it inevitably is, as to the top of the saw, backward of a line drawn from the starting point of its downward motion to the point of its termination.

It is manifest that the instruction asked was not in all its parts right, and, therefore, there was no error in refusing it; for the rule declared by this court is, that if an instruction is requested as a whole and it is not in every particular right, there is no error in refusing it.

"It is well settled that if a series of propositions be embodied in instructions and the instructions are excepted to in mass, if any one of the propositions be correct, the exception must be overruled."

Johnston vs. Jones, 1 Blatch., 220.
Rogers vs. The Marshal, 1 Wall., 644.
Case vs. Brown, 2 Wall., 328.

V.

There was no error whatever in the modification given by the court to the charge referred to in the fifth exception. The plaintiffs in error asked the court to instruct the jury that if the slides at the upper end of the saw are not curved, then there is no infringement. The court modified that instruction by adding: "the question is an open one for you to determine whether the defendants' upper guides are practically curved or not. If their form is so near a curve that on that account their practical operation and effect are the same or substantially the same as a curve, then the principle of the curved guides is invalid, and they are practically and substantially curves, notwithstanding that such is not their exact mathematical form."

This was a plain declaration of a most manifest principle, not only governing the law of patents but absolutely necessary to any protection whatever to the inventor. We have already cited cases to this point, but the following quotations will further illustrate it.

To constitute an infringement it is not necessary that the two inventions should be identical. The question is, Were the means used substantially the same?

Alden vs. Dewey, 1 Story, 336.
Root vs. Ball & Davis, 4 McL., 180.
Parker vs. Haworth, 4 McL., 374.
Burr vs. Duryea, 1 Wallace, 573.

The introduction of a mechanical equivalent does not relieve from the charge of infringement.

Tompkins vs. Gage, 5 Blatch., C. C., 268.
Taylor vs. Garretson, 9 Blatch., C. C., 156.
Conover vs. Roach, 4 Fish. Pat. Cas., 12.
Carter vs. Baker, 4 Fish. Pat. Cas., 404.
Gould vs. Rees, 15 Wall., 187.

One machine is the same in substance as another if

the principle be the same in effect though the form of the machine be different.

Brooke vs. Hermance, 1st Blatch., C. C., 398.
Blanchard vs. Beers, 2d Blatch., 418.
Parkhurst vs. Kinsman, 1st Blatch., 497.

The instructions given by the court to the jury in this case in this particular are almost identical with the language of the court in Davis vs. Palmer, 2d Brock, 298, 309, above cited. "If the imitation be so nearly exact as to satisfy the jury that the imitator attempted to copy the model and to make some almost imperceptible variations for the purpose of evading the right of the patentee, it may be considered a fraud upon the law and such slight variations be disregarded."

VI.

The sixth exception has already been fully considered. It relates only to the manner of placing the guides at the upper end of the saw. The plaintiffs in error asked the court to instruct the jury that if in their machine the upper and lower ends of the slides were not placed on a plumb line, then there was no infringement, which the court refused, and charged that the plaintiff was entitled to the protection of his patent, no matter whether the curved slides be set in one line or another, provided the combination is otherwise complete. "It is a mere matter of adjustment which any competent mechanic, skilled in building saw-mills and adjusting the saws for the most effective service, would readily understand and adopt."

To that nothing, we think, can be added. We have already, under a preceding head, discussed it, at least so far as we desire.

VII.

The next exception was a palpable attempt to state what in general was true, but to state it in such a connection that a jury might infer from it what was false.

It is certainly true that in determining whether a machine is an infringement we are to look at the machine when it is completed and finished, but it is equally as true that if a machine is so constructed that it must necessarily, and before it can become effective, wear itself into the form of the machine it was intended to infringe upon, then the machine is not completed until that final contemplated assimilation, though produced by wearing, has been consummated.

But, if a machine is constructed so as to conform in all respects to the description in the patent, except as to one particular, or as to one motion and effect, yet is so constructed and intended as to obtain that motion or effect in the usage of the machine, by the action or wearing of the parts, and it is so obtained, it is a piracy of the principle and a violation of the patent.

Page vs. Ferry, 1 Fish. Pat. Cases, 298.

It would be the most idle evasion to say that it was any less an infringement because the sharp angle formed by the meeting of the two straight lines in the plaintiffs in error's guides was worn away by the blocks to which the cross-head is pivoted, instead of by a file as is usually done. One is in every essential particular the equivalent of the other. The plaintiffs' guides, as we have seen, if thus formed by the meeting of two straight lines in an angle, could not be used until the angle is cut away or until it practically becomes a curve. If, then, the curve motion was the necessity, why did the plaintiffs resort to guides formed by the union of such straight lines at an angle? Only, it is manifest, for the purpose of evading the Hamilton patent. No motion can be effective for this purpose excepting a curved motion, which can only be communicated through curved guides. The farther the shape of the guides departs from the even curve the more imperfect it becomes until it reaches the point where it cannot be used at all. Why,

then, in the shape of the guides depart from the curve at all? Only, it is manifest, for the purpose of an evasion.

Why, having determined upon the guides formed by two such straight lines, attempt any conformity to the curved guides? Manifestly, because such straight guides cannot be used at all.

VIII.

The only remaining exception to be considered relates to the method of pivoting or fastening the saw to the pitman. The plaintiffs in error ask the court to instruct the jury that there is no infringement unless the saw is pivoted to the pitman above the cross-head; assuming that a pivoting above the cross-head is a material part of Hamilton's patent. That the court refused by a modification substantially as follows: that if the jury find that the pivoting below the cross-head was a mere evasion, or that the pivoting above or below was the result in each case only of the motion of the crank to which the pitman was connected, made necessary by the fact, whether the motion to be communicated was a backward or a forward motion to the cut of the saw, and that such pivoting above or below the cross-head was an old device, then it was an infringement.

To fully appreciate the correctness of this ruling of the court, it is only necessary to consider that when the upper end of the saw, by reason of the curved guides, is in the first half of its downward motion, moving away from the log, it is absolutely necessary that the lower end of the saw should, during the same period, move towards the log. Now, if the propelling power, the crank moved by the engine, has a backward motion, then the pivoting should be above the cross-head. If, however, the crank has a forward motion, then it becomes necessary to pivot the saw to the pitman below the cross-head.

The testimony fully explains that whole matter, as follows:

"The plaintiff gave evidence tending to show that both methods of attaching the lower end of the saw to the pitman, the one above and the other below the cross-head, were well known to mechanics before the date of the plaintiff's patent, and that the motion given by one when a forward motion was applied was precisely the same as given by the other when a backward motion was applied, and that this had been known to mechanics for many years."

p. 14, Record, last paragraph.

An examination of the models will show to the eye, more clearly than words can, how proper in this respect the instruction of the court was.

We submit, then, that all of the rulings of the court were substantially correct, and that upon the whole record there is no error.

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For Defendant in Error.